



Missouri Department of Natural Resources

Air Pollution Control Program

2017 Monitoring Network Plan

July 3, 2017

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SUMMARY OF PROPOSED CHANGES

Missouri's Monitoring Network Plan discusses the following recent and proposed changes in detail in the sections below:

- The Pevely lead monitoring site is proposed for discontinuation at the end of calendar year 2017.
- The latitude and longitude coordinates for some of the industrial SO₂ sites were adjusted from the preliminary coordinates in the 2016 Monitoring Network Plan. The final coordinates were measured after installation was complete. The name of one of the industrial site operators has changed due to an acquisition.
- Operation of the near real time PM₁₀ Metals Monitor (Xact™ 620) at the Blair Street site as a part of NATTS was discontinued in January 2017.
- A Teledyne API 640x PM_{2.5} instrument will be installed and operated at the Blair Street site to evaluate its potential future use in the network pending available funds.
- The Foley ozone monitoring site was relocated before the beginning of the 2017 ozone monitoring season to a new site, called Foley West, 1.49 kilometers east of the former site. Relocation was necessitated by a property transfer.
- The Branson ozone monitoring site is proposed for discontinuation at the end of the 2017 ozone monitoring season, October 31, 2017.
- A Photochemical Assessment Monitoring Station (PAMS) Implementation Plan is included as Section 9 of this Monitoring Network Plan. PAMS monitoring will begin at the Blair Street site in June 2019.

HOW TO MAKE PUBLIC COMMENTS CONCERNING THIS PLAN

This 2017 Monitoring Network Plan, Revision 0, was posted for comment on June 1, 2017. No comments were received through July 3, 2017. Therefore no response to comments is needed, as noted in Appendix 2. Comments concerning this Monitoring Network Plan were accepted electronically at: cleanair@dnr.mo.gov or in writing at the following address:

Missouri Department of Natural Resources
Air Pollution Control Program
Air Quality Analysis Section/Air Monitoring Unit
P.O. Box 176
Jefferson City, MO 65102

INTRODUCTION

The Missouri Department of Natural Resources operates an extensive network of ambient air monitors to comply with the Clean Air Act and its amendments. The Ambient Air Quality Monitoring Network for the State of Missouri consists of State and Local Air Monitoring Stations (SLAMS), Special Purpose Monitoring (SPM) Stations, and National Core (NCore) monitoring consistent with requirements in federal regulation 40 CFR 58.

40 CFR 58.10 requires that states submit to EPA an annual monitoring network plan including any proposed network changes. A network assessment is required every five years, and the most recent one was completed in 2015. 40 CFR 58.10 also requires that the plan include a statement of whether the operation of each monitor meets the requirements of appendices A, B, C, D, and E of 40 CFR 58 where applicable. All of the monitors in the Missouri air monitoring network, including those operated by the State and those operated by industries under State review meet the applicable requirements of 40 CFR 58. With regard to state and local air monitoring station (SLAMS) changes, approval by the Environmental Protection Agency Regional Administrator is required.

The plan must contain the following information for each monitoring station in the network; most of this information is listed for each site in Appendix 1; number 5 is addressed in the body of this document:

1. The Air Quality System site identification number for existing stations.
2. The location, including the street address and geographical coordinates, for each monitoring station.
3. The sampling and analysis method used for each measured parameter.
4. The operating schedule for each monitor.
5. Any proposal to remove or move a monitoring station within a period of eighteen months following the plan submittal.
6. The monitoring objective and spatial scale of representativeness for each monitor.
7. The identification of any sites that are or are not suitable for comparison against the annual PM_{2.5} National Ambient Air Quality Standard (NAAQS).
8. The metropolitan statistical area, core-based statistical area, combined statistical area or other area represented by the monitor.

Network Design

Federal regulation (40 CFR Part 58) establishes the design criteria for the ambient air monitoring network. The network is designed to meet three general objectives:

- Provide air pollution data to the public in a timely manner.
- Support compliance with ambient air quality standards and emissions strategy development.
- Support air pollution research studies.

Specific objectives for the monitoring sites are to determine the highest pollution concentrations in an area, to measure typical concentrations in areas of high population density, to determine the impact of significant sources or source categories, to determine general background levels and to determine the extent of regional pollutant transport among populated areas. Minimum site requirements are provided for ozone, sulfur dioxide, CO, NO₂, PM₁₀ and PM_{2.5} based on Core Based Statistical Area (CBSA) population.

Appendix E to Part 58 establishes the specific requirements for monitor/probe siting to ensure the ambient data represents the stated objectives and spatial scale. The requirements are

pollutant/scale specific and involve horizontal/vertical placement. Periodically, department staff visit and evaluate each monitoring site to ensure that each site continues to meet the requirements of 40 CFR 58 Appendix E. Any issues related to probe siting, such as growth of trees or other vegetation, are addressed by taking appropriate action following the site visits. Documentation of these reviews is maintained on file. Additional details concerning the sites may be found in Appendix 1.

There is only one PM_{2.5} monitor in Missouri that is not applicable for comparison to the annual NAAQS. The Branch Street site is a middle-scale site focused on a group of sources in the industrial riverfront area and is not representative of neighborhood or larger spatial scale for PM_{2.5} monitoring. The PM_{2.5} monitors deployed to collocate with the near-roadway NO₂ monitors are micro-scale monitors, but EPA has indicated in 40 CFR 58 Appendix D, 4.7.1(c)(2) that "...In many situations, monitoring sites that are representative of microscale or middle-scale impacts are not unique and are representative of many similar situations. This can occur along traffic corridors or other locations in a residential district. In this case, one location is representative of a number of small scale sites and is appropriate for evaluation of long-term or chronic effects." these monitors may be considered by EPA to be representative of larger areas near roadways and comparable to the annual PM_{2.5} NAAQS consistent with 40 CFR 58.30.

Unanticipated Network Modifications

Changes to the monitoring network may occur outside the annual monitoring network planning process due to unforeseen circumstances resulting from severe weather, natural events, changes in property ownership, or other situations that occur after the monitoring plan has been posted for public inspection and approved by the EPA Regional Administrator. Changes to the monitoring network may also be necessary because of financial constraints resulting from changes in federal funding or changes in funding available from air emission fees from industrial facilities. Any changes to the network that result due to conditions outside the state's logistical control and not included in the current monitoring network plan will be communicated in writing to EPA Region VII staff and identified in the subsequent annual monitoring network plan.

Special Purpose Monitors (SPM)

Consistent with 40 CFR 58.20 (a) "An SPM is defined as any monitor included in an agency's monitoring network that the agency has designated as a special purpose monitor in its annual monitoring network plan and in AQS, and which the agency does not count when showing compliance with the minimum requirements of this subpart for the number and siting of monitors of various types."

Special purpose monitors may be established for many different purposes, including but not limited to, NAAQS compliance evaluation, air quality research and characterization, air quality investigation, and monitoring method evaluation.

The department includes SPMs in the annual monitoring network plan required by 40 CFR 58.10. The department installs and approves the installation of these monitors consistent with 40 CFR 58.20 (f). In addition, the department removes, or allows removal of these monitors,

following federal guidelines. There is more description of each SPM later in the document. The Missouri Monitoring Network Description, Appendix 1, identifies which monitors are SPM and which are SLAMS.

Industrial Monitors

Ambient air monitoring sites classified as Industrial in this plan indicate that the ambient air monitoring at that site is being conducted by the industrial source or its contractor under an approved industrial monitoring Quality Assurance Project Plan (QAPP) and departmental Quality Management Plan (QMP). Department staff conducts quality assurance audits of these monitoring sites consistent with the approved QAPP.

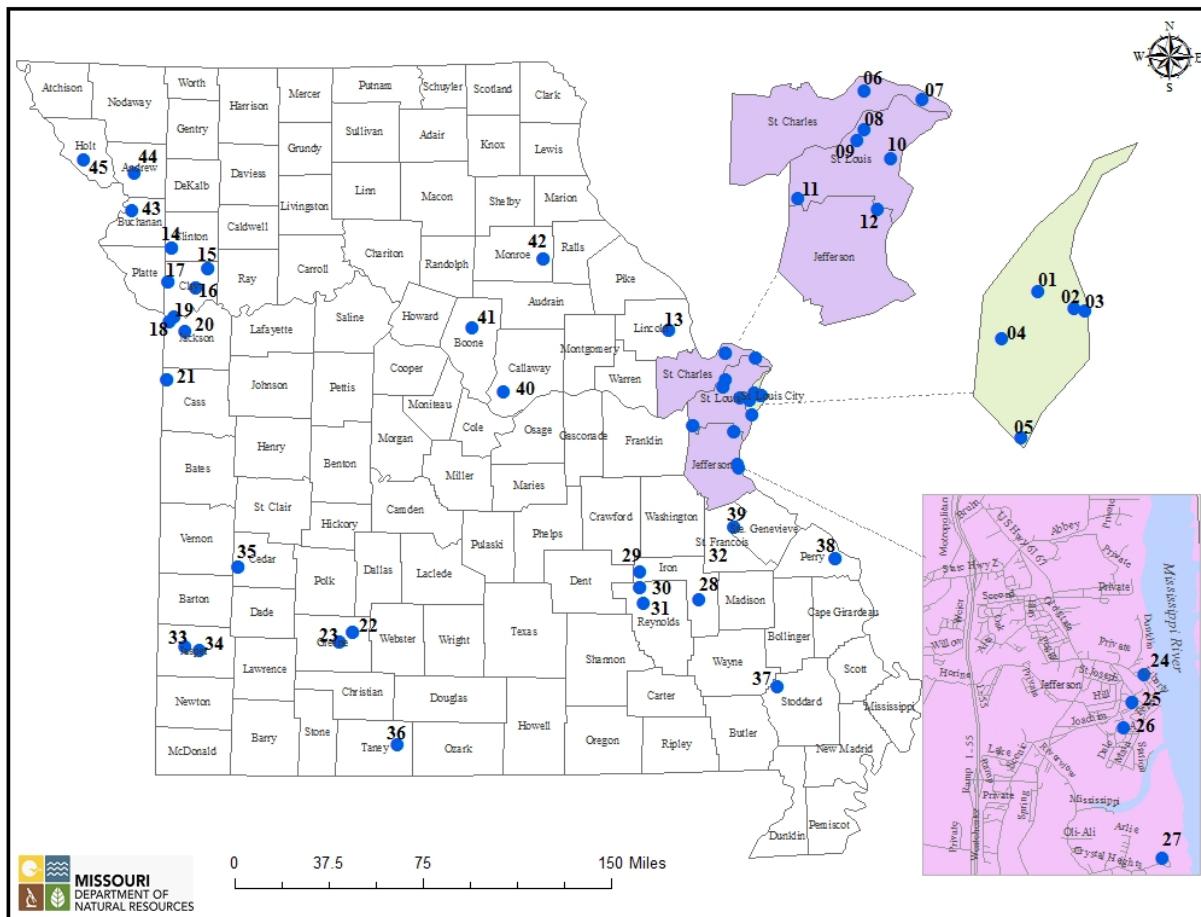
For decades Missouri has overseen ambient air monitoring sites operated by industrial sources for NAAQS compliance. The department has incorporated these Industrial sites in the annual Monitoring Network Plans. Currently, industrial monitoring for some lead and SO₂ sites is incorporated in the ambient air monitoring network.

Some industrial monitoring sites in the lead network are classified in AQS as non-regulatory due to the sites having transitioned to non-ambient status. However, the department has required continued monitoring at these locations in agreements with the industrial source for trends analysis or other purposes.

2017 AMBIENT AIR MONITORING NETWORK, STATE SITES

The 2017 statewide monitoring network is shown in the following map and table.

2017 Missouri State Monitoring Network



Legend (State's Monitoring Network)						
<u>St. Louis Area</u>			<u>Springfield Area</u>		<u>Acronym</u>	
Site#	Site Name	Parameter Monitored	Site#	Site Name	Parameter Monitored	PM ₁₀
01	Margareta	PM ₁₀ , SO ₂ , NO ₂ , NO _x , NO, IT	22	Fellows	O ₃ , IT	Particulate Matter (Diameter size ≤10 micrometer) PM10 Local Condition
02	Blair Street	PM ₁₀ , PM _{10-LC} , PM _{2.5} , PM _{2.5} (Spec), PMCoarse, O ₃ , SO ₂ , NO ₂ , NO _y , NO _x , NO, CO, Carbonyls, PAHs, VOCs, Air Toxics, Carbons, PM ₁₀ Metals, WS, WD, OT, IT, SR, BP, RH	23	Hillcrest	O ₃ , PM ₁₀ , PM _{10-LC} , PM _{2.5} , PMCoarse, OT, IT, BP, RH	PM10-LC PM2.5 PMCoarse
03	Branch Street	PM ₁₀ , PM _{10-LC} , PM _{2.5} , PMCoarse, WS, WD, OT, IT, BP, RH	24	Sherman	Pb	Particulate Matter (Diameter size ≤2.5 micrometer)
04	Forest Park	PM _{10-LC} , PM _{2.5} , PMCoarse, NO ₂ , NO _x , NO, CO, BC, WS, WD, OT, IT, SR, BP, RH, Prec	25	Dunklin	Pb	Particulate Matter (Diameter size between 2.5 and 10 micrometer) Speciation SO ₂ NO ₂ NO NO _y NO _x CO Pb
05	South Broadway	PM10, PM10-LC, PM2.5, PMCoarse, IT, BP, RH	26	Mott Street	Pb	Nitrogen Dioxide Nitric Oxide
06	Orchard Farm	O ₃ , IT	27	Ursuline	Pb	Reactive Oxides of Nitrogen Oxides of Nitrogen
07	West Alton	O ₃ , WS, WD, OT, IT, SR	28	Glover	Pb	Carbon Monoxide Black Carbon
08	Rider Trail I-70	NO ₂ , Nox, NO, WS, WD, OT, IT, SR, Prec, SO ₂ (RES)	29	Buick NE	Pb, SO ₂ , WS, WD, IT	Precipitation WS
09	Maryland Heights	O ₃ , IT	30	Oates	Pb	Resultant Wind Speed WD
10	Ladue	PM2.5, WS, WD, OT, IT, BP, RH	31	Fletcher	Pb	Resultant Wind Direction OT
11	Pacific	O ₃ , WS, WD, OT, IT	32	St. Joe	Pb	Outside Temperature IT
12	Arnold West	PM10, PM10-LC, PM2.5, PM2.5(Spec), IT	33	Alba	O ₃ , IT	Inside Temperature SR
13	Foley West*	PMCoarse, O ₃ , WS, WD, OT, IT, BP, RH	34	Carthage	PM10, WS, WD, IT	BP
			35	El Dorado Springs	PM10-LC, PM2.5, PMCoarse, O ₃ , WS, WD, OT, IT, BP, RH	RH
			36	Hercules Glades	PM2.5 (Spec)-IMPROVE	Relative Humidity
			37	Mingo	PM2.5 (Spec)-IMPROVE	Interagency Monitoring of Protected Visual Environment (Regional Haze) Research
			38	Farrar	O ₃ , IT	
			39	Bonne Terre	O ₃	
			40	New Bloomfield	O ₃ , IT	
			41	Finger Lakes	O ₃ , IT	
			42	Mark Twain State	PM10, SO ₂ , NO ₂ , Nox, NO, O ₃ , WS, WD, IT	
			43	St. Joseph Park	PM10, PM10-LC, PM2.5, PMCoarse WS, WD, OT, IT, RH	
			44	Pump Station	PMCoarse	
			45	Savannah Forest City, Exide	O ₃ , WS, WD, IT	
					*Relocated from former Foley site	
21	Richards	PM10-LC, PM2.5,				
	Gebaur-South	PMCoarse, O ₃ , WS, WD, OT, IT, BP, RH				

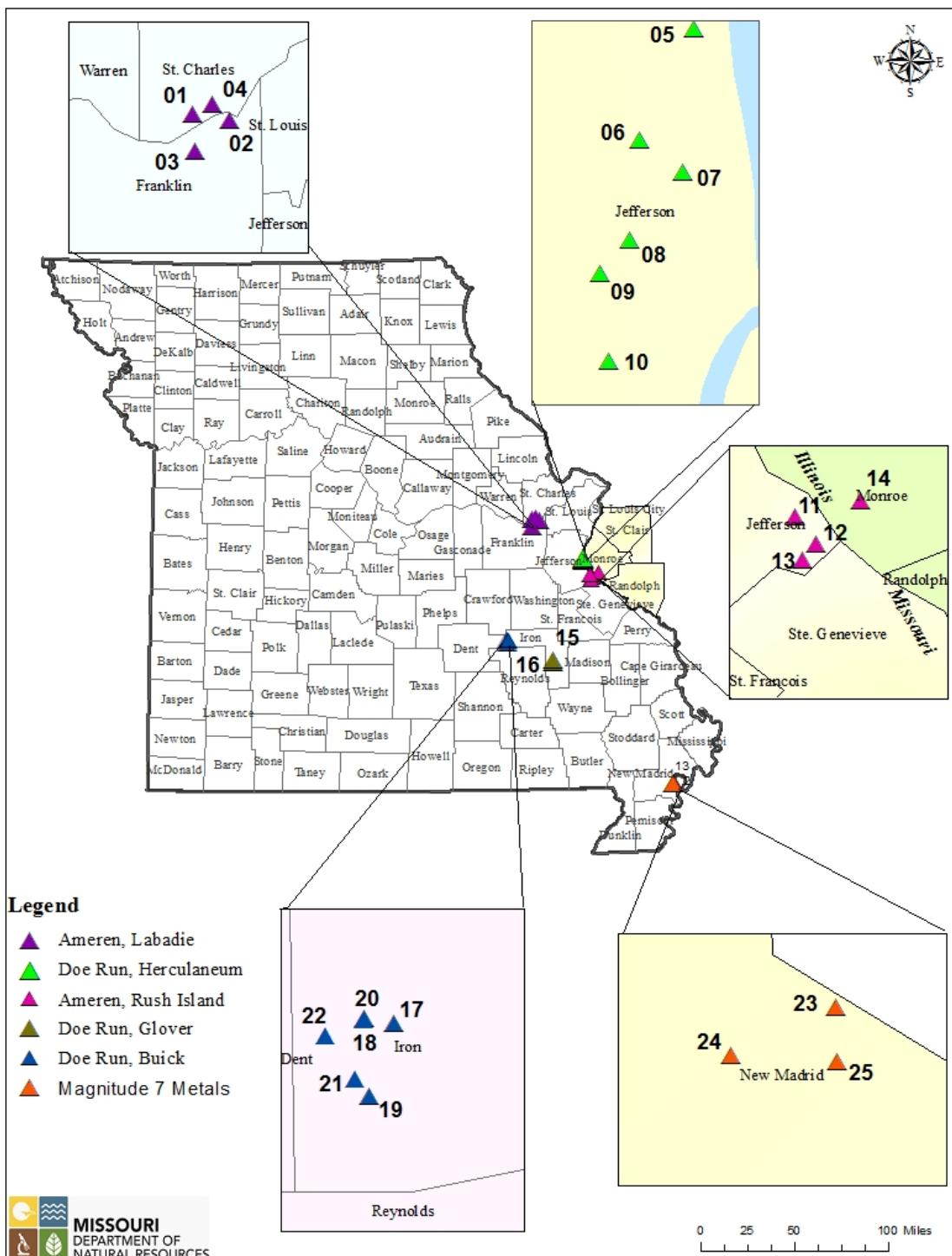
Notes:

- The acronym PM_{10-LC} is also commonly referred to as PM_{10c} when collected with a low volume sampler consistent with appendix O to Part 50. PM_{10-LC} means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers where the concentration is reported at local conditions of ambient temperature and barometric pressure. PM_{10-LC} is used in this document to describe any continuous or filter based PM₁₀ low volume measurement concentration that is reported at local conditions of ambient temperature and barometric pressure.
- PM₁₀ means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers where the concentration is adjusted to EPA reference conditions of ambient temperature and barometric pressure (25 °C and 760 millimeters of mercury or STP).
- PMcoarse is also frequently referred to as PM_{10-2.5}.

2017 AMBIENT AIR MONITORING NETWORK, INDUSTRIAL SITES

Monitoring sites operated by industries are shown in the following map and listed in the following table.

2017 Missouri Industry Monitoring Networks



Legend (Industry Monitoring Network)

Ameren, Labadie Energy Center

Site#	Site Name	Parameter Monitored
01	Northwest	SO2, (WS, VWS, WD, OT, σ_{ϕ} , σ_e , RH) ^a
02	Valley	SO2, (WS, VWS, WD, OT, SR, BP, RH, Prec, σ_{ϕ} , σ_e) ^a
03	Southwest	SO2
04	North	SO2

Acronym

SO2	Sulfur Dioxide
Pb	Lead (High Volume)
σ_e	Sigma Theta (Standard Deviation of Horizontal Wind Direction)
WS	Resultant Wind Speed
WD	Resultant Wind Direction
OT	Outside Temperature
SR	Solar Radiation
BP	Barometer Pressure
RH	Relative Humidity
σ_{ϕ}	Sigma Theta (Standard Deviation of Vertical Wind Speed)
Prec	Precipitation
VWS	Vertical Wind Speed

Doe Run, Herculaneum

Site#	Site Name	Parameter Monitored
05	Sherman	Pb
06	Dunklin	Pb
07	Broadway	(WS, WD, OT, SR, BP, RH, Prec, σ_e) ^a
08	Mott Street	Pb
09	North Cross	Pb
10	Church Street*	Pb

Ameren, Rush Island Energy Center

Site#	Site Name	Parameter Monitored
11	Weaver-AA	SO2
12	Johnson Tall Tower	(WS, VWS, WD, OT, σ_{ϕ} , σ_e) ^a
13	Natchez	SO2
14	Fults, IL	SO2, (WS, VWS, WD, OT, SR, BP, RH, Prec, σ_{ϕ} , σ_e) ^a

^a Metrological Data is not submitted to the EPA Air Quality (AQS) Database

^a Regulatory Dispersion Modeling Grade Parameters

* Non-Ambient Monitor

Doe Run, Glover

Site#	Site Name	Parameter Monitored
15	Post Office #2*	Pb
16	Big Creek*	Pb

Doe Run, Buick

Site#	Site Name	Parameter Monitored
17	Buick NE	Pb
18	Buick North#5*	Pb
19	Buick South#1*	Pb, (WS, WD, OT, SR, BP, RH, Prec, σ_e) ^a
20	Hwy 32 Northeast	SO2
21	West Entrance	SO2
22	County Road 75	SO2

Magnitude 7 Metals

Site#	Site Name	Parameter Monitored
23	Site #1	SO2
24	Site #2	SO2
25	Site #3	SO2, (WS, WD, OT) ^a

PROPOSED CHANGES TO THE NETWORK

1. Lead Monitoring Network

Changes to airborne lead monitoring requirements were published in the Federal Register: December 27, 2010 (Volume 75, Number 247). The new rules require a plan for monitoring lead sources emitting 0.50 tons per year or more, revised from the previous requirement for monitoring sources emitting one ton per year or more. Airports are specifically exempted from these requirements except for a special study being conducted at specific airports, none of which are in Missouri.

Department staff reviewed the 2014 reported lead emissions and identified only one source not previously identified, NorthStar Battery plant number 1 in Springfield, as emitting greater than 0.50 ton of lead per year and for which ambient air monitoring is not currently being conducted or where EPA has not already granted a modeling waiver consistent with 40 CFR 58 Appendix D, 4.5 (a) (ii). However, the most recent revised construction permit (no. 122016-001, issued in December 2016) for that facility limits its lead emissions to not more than 0.25 ton per year. Therefore, monitoring adjacent to this facility is not required. A review of quality-assured 2015 emissions data and preliminary 2016 emissions data did not identify any additional sources emitting greater than 0.50 ton per year.

1.1 Forest City, Exide Monitoring Site

The 2013 Monitoring Network Plan identified the resumption of lead TSP monitoring at a location near the Exide Secondary Lead Smelter in Forest City, MO. The monitoring method initially deployed, as described in the 2012 Monitoring Network Plan, utilized the low volume PM₁₀ sampler and Pb-PM₁₀ analysis performed by X-ray Fluorescence (XRF) following specifications and procedures in 40 CFR part 50 Appendix Q. Since the deployment of the Pb-PM₁₀ FRM, as a Special Purpose Monitor, in March of 2012, three month rolling averages of airborne lead were monitored at concentrations greater than 0.15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). As a result a Pb-TSP sampler was deployed in August 2012 for subsequent attainment determination. The department discontinued the Pb-PM₁₀ FRM in December 2013 but the Pb-TSP sampler continues to monitor lead at the site. As a result of changes in operations at that facility, including addition of pollution control equipment, an exceedance of the lead NAAQS has not been monitored at that site since October-December 2013. Discontinuing the Forest City monitor may be proposed in future monitoring network plans if this trend continues.

1.2 Doe Run Operated Sites

1.2.1 Doe Run Lead Sites

Doe Run operates lead monitoring sites in the vicinity of their industrial facilities in Herculaneum, Glover, and Boss. Operation of some of these sites is required by Consent Judgments or Agreements with the department, and operation of other sites is voluntary.

1.2.2 Doe Run Meteorological Sites

Doe Run Herculaneum also operates one ten meter tower meteorological monitoring site as per language set forth under the 2011 Consent Judgment. Doe Run Herculaneum discontinued the 40 meter tower at Broad Street as per the Consent Judgment.

1.3 Department's Lead Monitoring Network in Herculaneum

Monitoring at the Pevely North site was discontinued in January 2017 as proposed in the 2016 Monitoring Network Plan and approved by US EPA.

With the cessation of primary lead smelting at the Doe Run facility in Herculaneum, the department also proposes discontinuing monitoring at the Pevely site at the end of calendar year (CY) 2017. That site has not shown an exceedance of the lead NAAQS since September-November 2012, and has averaged $0.013 \mu\text{g}/\text{m}^3$ since smelting operations at Herculaneum were discontinued at the end of 2013. The Pevely site meets the conditions in 40 CFR Part 58.14 (c) (1) for discontinuation; if the site continues to show attainment, it will have shown attainment for five years by the end of November 2017, it has a probability of less than 10 percent of exceeding 80 percent of the NAAQS based on recent monitored concentrations, it is not required by an attainment or maintenance plan, and there are other monitors in the Herculaneum area with higher design values that will remain in operation.

The department continues to carefully evaluate the lead data monitored at its sites in Herculaneum and may consider additional modification in the future, particularly sampling schedules at the Dunklin, Sherman, and Mott sites.

1.4 St. Joe State Park Monitoring Site

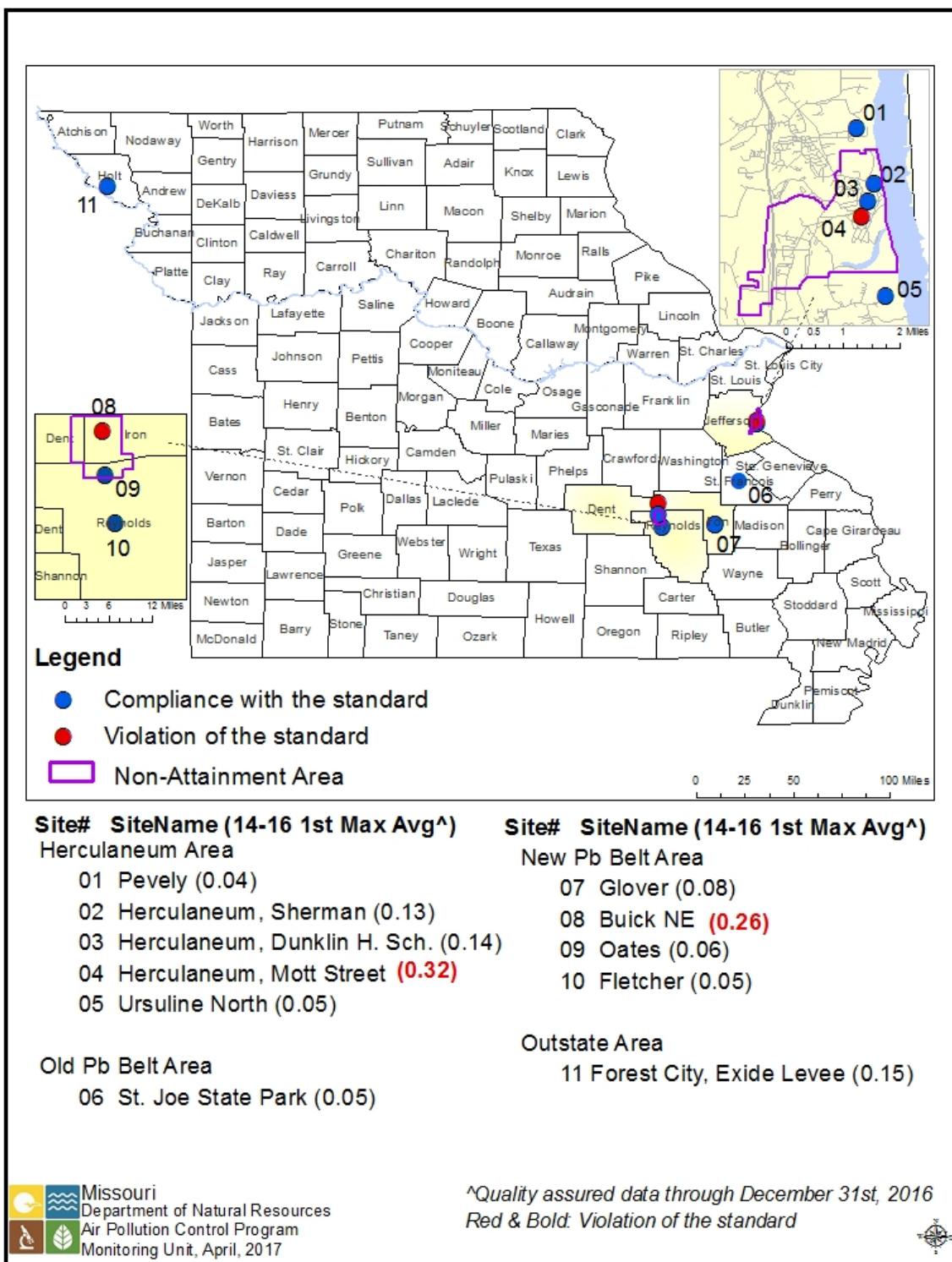
The department has reduced the frequency of sampling at the Special Purpose lead monitoring site at St. Joe State Park from every third day to every sixth day. The St. Joe State Park site was intended to monitor airborne lead concentrations during remediation activities involving old lead mining waste in the Federal Mine Tailings. The bulk of the remediation activity was completed as of late July/early August of 2014. The three-month rolling average has not exceeded the lead standard, $0.15 \mu\text{g}/\text{m}^3$, since the site began monitoring lead on July 1, 2010. The highest three-month rolling average airborne lead concentration at that site was $0.14 \mu\text{g}/\text{m}^3$ in July-September 2011. This elevated lead concentration was attributable to remediation activities near the monitor. Since that time the three-month average lead concentration at that site has not exceeded $0.13 \mu\text{g}/\text{m}^3$.

1.5 Bills Creek Lead Monitor

Monitoring at the Bills Creek site was discontinued at the end of January 2017 as proposed in the 2016 Monitoring Network Plan and approved by US EPA.

The 2017 lead monitoring network is shown in the map below.

2017 Missouri Lead Monitoring Network*, NAAQS=0.15 $\mu\text{g}/\text{m}^3$ (3 month)



*The Pevely site is proposed for discontinuation at the end of CY 2017. No other changes are proposed in this plan.

2. Sulfur Dioxide (SO₂) Monitoring Network

On June 2, 2010, the US EPA revised the primary SO₂ standard by establishing a 1-hour standard at the level of 75 parts per billion (ppb). The EPA revoked the two previous primary standards of 140 ppb evaluated over 24-hrs and 30 ppb evaluated over an entire year. The 2011 Monitoring Network Plan¹ identified the minimum network monitoring required by the Population Weighted Emissions Index (PWEI). This analysis has been updated using 2010 census data and 2011 NEI emissions. The required numbers of monitoring sites based on the PWEI (2 sites each in the St. Louis and Kansas City CBSAs) did not change. The department's 2017 SO₂ monitoring network is shown in the map below.

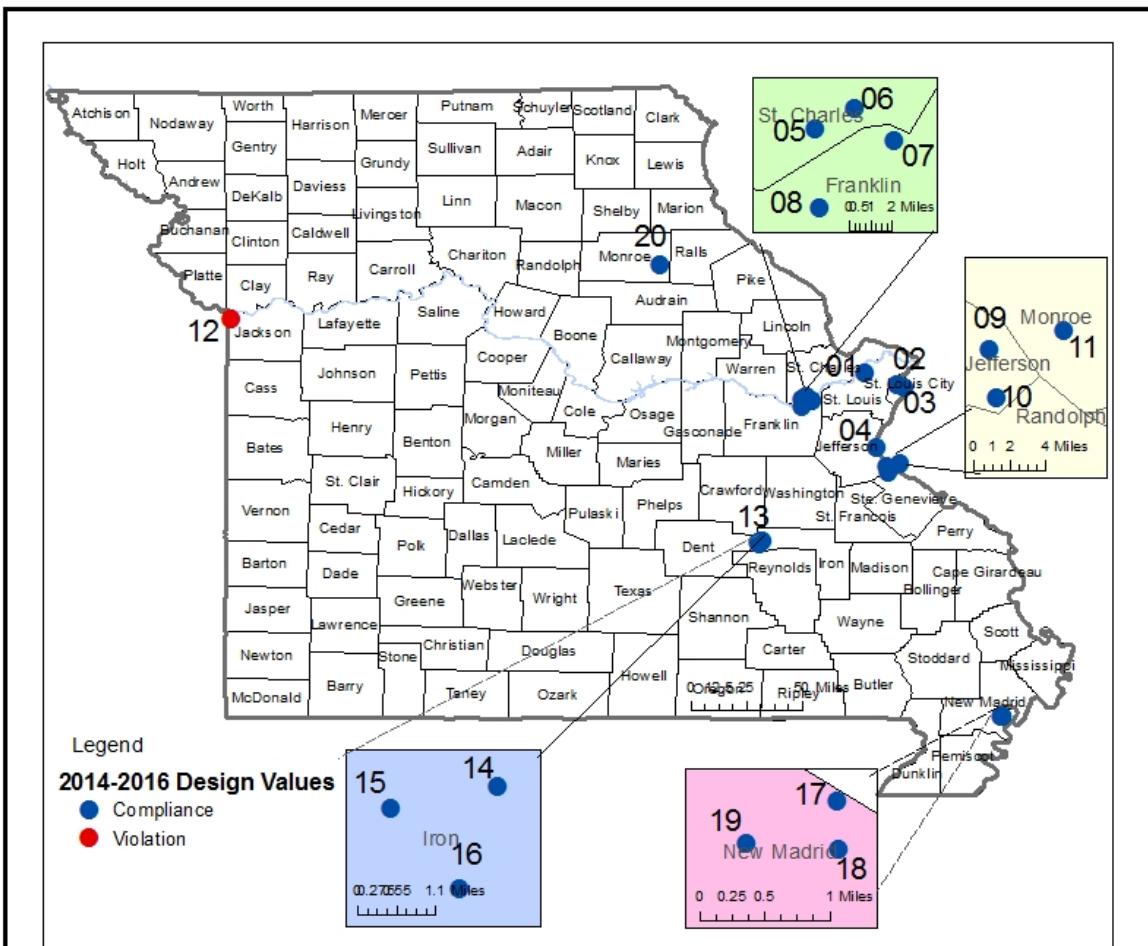
In May 2014 US EPA published proposed data requirements regulations related to SO₂ air quality monitoring and air quality dispersion modeling near emission sources. These requirements were finalized in the SO₂ Data Requirements Rule (DRR) published in the Federal Register on August 21, 2015. This final rule requires that air agencies must characterize air quality, either by monitoring or modeling, around sources that emit 2,000 tons per year (tpy) or more of SO₂. The requirement for air quality characterization near a source may be avoided by adopting enforceable emission limits that ensure that the source will not emit more than 2,000 tpy of SO₂. On January 15, 2016 the department submitted a final list identifying the sources in the state around which SO₂ air quality will be characterized. That submittal may be found at <https://www3.epa.gov/airquality/sulfurdioxide/drr/mo.pdf>. The Ameren Labadie Energy Center and the Noranda Aluminum (now known as Magnitude 7 Metals) facility (both discussed below) were included on that list. The Doe Run Buick Resource Recycling Facility (also discussed below) reported emissions less than 2,000 tpy but was also included on the list because emissions from that facility were uncertain and under review at the time of the January 2016 submittal. The Ameren Rush Island Energy Center was not included in the list, because it is within a previously-designated nonattainment area (designated as nonattainment due to emissions from another facility). Monitoring in the area around that Rush Island is being conducted on an accelerated schedule (compared to the DRR timeline) by agreement between the department and Ameren associated with the plan for the Jefferson County nonattainment area submitted to EPA in May 2015.

For each facility listed in the January 2016 submittal, the state was required to identify by July 1, 2016, the approach (ambient monitoring or air quality modeling) that would be used to characterize air quality or identify sources whose emissions will be limited to less than 2,000 tpy by an enforceable agreement. For source areas that were to be evaluated through ambient monitoring, the air agency was required to submit information on monitoring sites to the EPA by July 1, 2016, as part of its annual monitoring network plan. This SO₂ monitoring to meet the DRR was required to begin by January 1, 2017. Monitoring near these sources in Missouri is discussed in the following sections. This monitoring is being conducted by the industries operating the sources, but the monitoring must be conducted in accordance with the SLAMS requirements in 40 CFR Part 58, and the department reviewed and approved the siting of the monitors based on federal regulations and oversaw the operation of the monitors. To meet the requirements of the DRR, these monitors will need a minimum of three years of monitoring data.

¹ <http://dnr.mo.gov/env/apcp/docs/2011monitoringnetwork.pdf>

The sources cannot discontinue monitoring thereafter without EPA approval based on the requirements of 40 CFR 51.1203(c)(3) or 40 CFR 58.14.

2017 Missouri Sulfur Dioxide (SO₂) Monitoring Network*, NAAQS=75 ppb (1 hour)



St. Louis Area MO & IL

- 01. Rider Trail, I-70~ (14)
- 02. Margaretta (16)
- 03. Blair Street (25)
- 04. Herculaneum, Mott Street (23)
- 05. Ameren-Northwest*~ ^ (28)
- 06. Ameren-North*+^
- 07. Ameren-Valley*~ ^ (28)
- 08. Ameren-Southwest*+^
- 09. Ameren-Weaver & Hwy AA*~ (20)
- 10. Ameren-Natchez*~ (24)
- 11. Ameren-Fults, IL*~ (19)

Kansas City Area, MO

- 12. Troost (92)
- Outstate Area, MO
- 13. Buick NE (46)
- 14. Hwy 32 Northeast*+^
- 15. County Road 75 *+^
- 16. West Entrance*+^

Outstate Area, MO

- 17. M7M Site #1-AECI Water Tower*+^
- 18. M7M Site #2- East Graveyard*+^
- 19. M7M Site #3- West Entrance*+^
- 20. Mark Twain State Park (7)

^aQuality assured data through December 31st, 2016

^{*}Special Purpose Monitor

⁺Industry Monitor

[~]Less than 3 years of data

⁺Began Monitoring in 2017

[^]Data Requirement Rule Sites

M7M: Magnitude 7 Metals



*No changes to the SO₂ network are proposed in this plan.

2.1 Industrial SO₂ & Meteorological Monitoring near the Labadie and Rush Island Energy Centers

As indicated in the Missouri 2015 Monitoring Network Plan, two SO₂ ambient Air Monitoring networks were deployed around the Labadie and Rush Island power plants. At the time that plan was posted for public inspection, EPA had not promulgated the SO₂ DRR or revisions to the monitoring requirements in 40 CFR 58. The SO₂ DRR and revisions to 40 CFR 58 were published in the Federal Register on August 21, 2015 and March 28, 2016, respectively.

The revised quality assurance requirements of 40 CFR 58 Appendix A, indicate in section 1.1 (a) that “This appendix specifies the minimum quality system requirements applicable to SLAMS and other monitor types whose data are intended to be used to determine compliance with the NAAQS (e.g., SPMs, tribal, CASTNET, NCore, industrial, etc.),...” This revision supports states using monitors with any of these classifications to satisfy the DRR monitoring requirements in 40 CFR 51.1203 (c) so long as these monitors are operated in a manner equivalent to SLAMS. Both SLAMS and industrial NAAQS compliance monitoring networks in Missouri are operated under a department approved QAPP consistent with the departmental Quality Management Plan (QMP) that has been approved by EPA Region VII.

EPA Region VII indicated in a January 25, 2016 letter approving our 2015 Monitoring Network Plan that they did not evaluate the Labadie and Rush Island SO₂ monitoring networks described in detail in that plan due to our classification of those monitors as Special Purpose Monitors (SPM).

After reviewing the revisions to 40 CFR 58 against monitor classifications as they apply to NAAQS compliance monitoring, we classified the Labadie and Rush Island SO₂ monitors as industrial SO₂ monitors. This is consistent with how we handle industrial monitors used for NAAQS compliance in both our SO₂ and lead ambient air monitoring networks.

The following sections describe the current status of the Labadie and Rush Island SO₂ monitoring networks based on the 2016 Monitoring Network Plan.

2.1.1 Labadie Energy Center

On March 20, 2015 EPA updated implementation guidance as a result of the March 2, 2015 U.S. District Court for the Northern District of California accepting an enforceable order and agreement between the EPA and Sierra Club and Natural Resources Defense Council. This agreement is intended to resolve litigation related to the deadline for completing the 1-hour SO₂ NAAQS designations process.

Since proposing the first two SO₂ monitors near the Labadie Energy Center in our 2015 Monitoring Network Plan, EPA promulgated the SO₂ DRR. Consistent with the DRR definitions section, 40 CFR 51.1200, the area designation status with respect to the one-hour SO₂ NAAQS determines if this area is subject to the DRR. The DRR applies if the area around the Labadie Energy Center is not designated as a nonattainment area. On June 30, 2016, EPA designated that area as unclassifiable (Federal Register, volume 81, number 133, July 12, 2016).

Therefore, the DRR applies to this area and to the monitoring network as proposed in the 2016 Monitoring Network Plan and approved by EPA.

The department will continue to work with Ameren to collect quality assured SO₂ ambient air quality data and meteorological data near the Labadie Energy Center to provide quantifiable and useful technical information to meet the DRR requirements and supplement the ongoing 1-hour SO₂ NAAQS implementation process.

Two industrial SO₂ ambient air monitoring sites and a meteorological monitoring station began operation in April 2015 in the area around the Ameren Labadie Energy Center, located at 226 Labadie Power Plant Road in Franklin County, Missouri. Two additional industrial SO₂ monitoring sites southwest and north of the Labadie Energy Center were installed and began operation on January 1, 2017. The location of those sites was determined on the basis of dispersion modeling as discussed in the 2017 Monitoring Network Plan. Also, meteorological monitoring using a 10 meter tower was added at the Northwest site, and the SODAR instrument was relocated from the Valley site to the Northwest site in February 2017. These monitoring sites (see the following table) are operated by Ameren under a department-approved Quality Assurance Project Plan (QAPP). The rationale for site selection based on modeling results is discussed extensively in the 2015 and 2016 Monitoring Network Plans.

Summary of Labadie area Industrial Monitoring Stations:

Monitoring Objective: Source Oriented

Spatial Scale of representativeness: Middle Scale (100m² to 0.5 km²)

Labadie Northwest -SO₂, 10 Meter Meteorological Station and Sound Detection and Ranging (SODAR). (Lat: 38.5818 Long: -90.865528)

Labadie Valley -SO₂, 10 Meter Meteorological Station. (Lat: 38.572522 Long: -90.796911)

Labadie Southwest -SO₂, (Lat: 38.52825 Long: -90.86301;

Labadie North –SO₂, (Lat: 38.59557 Long: -90.82864;

2.1.2 Rush Island Energy Center

On March 23, 2015 the department and Ameren entered into a Consent Agreement (Appendix 3 of the 2015 Monitoring Network Plan) which included Ameren installing and operating an SO₂ monitoring network around the Rush Island Energy Center under department oversight. The siting of these monitors was consistent with the technical process described in the SO₂ DRR.

Although the primary objective of the Rush Island ambient air monitoring project is to satisfy the terms of the aforementioned Consent Agreement, it is possible that the quality assured monitoring data may be used for other future purposes depending on the final outcome of EPA's national implementation strategy for the 2010 1-hour SO₂ NAAQS and the Jefferson County Nonattainment area implementation process.

The department will continued to work with Ameren to collect quality assured SO₂ ambient air quality data and meteorological data near the Rush Island power station to provide quantifiable and useful information to supplement the ongoing 1-hour SO₂ NAAQS implementation process.

The Rush Island monitoring network design was based on evaluation of dispersion modeling, as described in the 2015 and 2016 Monitoring Network Plans. This network began operation in December 2015.

Summary of Rush Island area Industrial Monitoring Stations:

Monitoring Objective: Source Oriented

Spatial Scale of representativeness: Middle Scale (100m² to 0.5 km²)

Weaver-AA -SO₂, (Lat: 38.144529 Long: -90.304726)

Natchez -SO₂, (Lat: 38.10525 Long: -90.29842)

Fults, IL, -SO₂, 10 Meter Meteorological Station (Lat: 38.15908 Long: -90.22728)

Johnson Tall Tower -Meteorological Station Only, anemometers at 62.5m and 132.5m levels (Lat: 38.11999 Long: -90.28214)

2.2 Industrial SO₂ & Meteorological Monitoring near the Doe Run Buick Resource Recycling Facility

The Doe Run Company began SO₂ monitoring at three sites in the area around the Buick Resource Recovery Facility near Boss, Missouri starting January 1, 2017 to meet the requirements of the SO₂ Data Requirements Rule, as described above. Meteorological monitoring is already being conducted at the Buick South lead monitoring site, south of the facility. These sites are being operated under a department-approved QAPP, which includes performance evaluations (audits) by department staff. Locations of these ambient SO₂ monitoring sites was determined on the basis of air quality modeling of the impact of facility emissions, as described in the 2016 Monitoring Network Plan.

Summary of Doe Run Buick area Industrial Monitoring Stations:

Monitoring Objective: Source Oriented

Spatial Scale of representativeness: Middle Scale (100m² to 0.5 km²)

West Entrance -SO₂, (Lat: 37.63211 Long: -91.13565)

County Road 75 -SO₂, (Lat: 37.64876 Long: -91.14890)

Hwy 32 Northeast (Former PSD site) -SO₂, (Lat: 37.65319 Long: 91.12795)

2.3 Industrial SO₂ & Meteorological Monitoring near the Magnitude 7 Metals (formerly Noranda Aluminum) Facility

Magnitude 7 Metals is conducting SO₂ monitoring at three sites and meteorological monitoring at one site in the area around their facility near New Madrid, Missouri. Monitoring at these sites started in January, 2017 to meet the requirements of the SO₂ Data Requirements Rule, as described above. These sites are being operated under a department-approved QAPP, which includes performance evaluations (audits) by department staff. Locations for these ambient SO₂ monitoring sites were determined on the basis of air quality modeling of the impact of facility emissions, and the potential area for meteorological monitoring was determined on the basis of an analysis by a department meteorologist. These evaluations are described in the 2016 Monitoring Network Plan.

Summary of Magnitude 7 Metals area Industrial Monitoring Stations:

Monitoring Objective: Source Oriented

Spatial Scale of representativeness: Middle Scale (100m² to 0.5 km²)

Site 1 -SO₂, (Lat: 36.51361 Long: -89.56111)

Site 2 -SO₂, (Lat: 36.50861 Long: -89.56083)

Site 3 -SO₂ and Meteorology, (Lat: 36.50889 Long: -89.57083)

2.4 Rider Trail I-70 Site

The department added a sulfur dioxide air monitor to the existing Rider Trail I-70 monitoring site in May 2016. The addition of a sulfur dioxide monitor at this site is to evaluate sulfur dioxide levels in the general area. Any sulfur dioxide concentrations monitored at this site may be due to several emissions sources in the area. If the monitor records sulfur dioxide at levels of concern, the department will gather additional information to try to determine which sources are causing or contributing to the levels of concern. Since the site was installed the fourth highest daily 1-hour SO₂ concentration monitored in 2016 was 14 ppb. The fourth highest daily 1-hour SO₂ concentration monitored in 2017 through 5/22/17 is 10 ppb.

Since the monitor is located in the near-roadway environment and there are several SO₂ sources in the area, the department is initially classifying the spatial scale of representativeness of the SO₂ measurements as middle-scale. This classification may be reevaluated if trends in the monitoring data and other analysis warrant increasing the spatial scale of representativeness. The monitoring objective for this monitor is to measure population exposure.

3. National Air Toxics Trends Stations (NATTS), and Other Non-Criteria Pollutant Special Purpose Monitoring

3.1 National Air Toxics Trends Stations Monitoring

Routine NATTS monitoring will continue at Blair Street. Operation of the near real time PM₁₀ Metals Monitor (Xact™ 620) at the Blair Street site was discontinued in January 2017 due to lack of funds for extensive repairs to the instrument.

3.2 Organic and Elemental Carbon Monitor Evaluation Project

The EPA Office of Air Quality Planning and Standards (OAQPS) contacted the EPA Regional Office and the state of Missouri about participating in a three year monitor evaluation study which began in the summer/fall of 2011. EPA provided the monitor and certain related components in exchange for the state providing in-kind staff time to operate and report data to the EPA Air Quality System (AQS) from the instrument. The location for the study is the Blair St. site, since the site is currently part of the NCORE, NATTS and Chemical Speciation monitoring programs. The data from the Blair Street site is used extensively in various health and air pollution studies. Since elemental and organic carbon account for a significant amount of the particulate matter mass measured at this site at various times, understanding the temporal variation in carbon species relative to the 24-hr integrated filter based carbon data will be useful in understanding the local source contributions and diurnal variation in the carbon concentrations. This project will be useful in supplementing ambient air monitoring data objectives addressed in EPA's multi-pollutant monitoring strategy.

Currently, the preliminary near real-time monitoring data for this monitor is being reported each hour to the State of Missouri web page and is being uploaded to AQS.

Continued operation of this instrument is dependent on the availability of funds.

3.3 Black Carbon

As part of the condition of receiving one time section 103 Grant funds to implement certain sites for the near-roadway monitoring network, the department will continue to conduct special purpose PM_{2.5} black carbon monitoring at the Forest Park and Blue Ridge I-70 near roadway NO₂ sites as well as at the Blair Street NATTS site using aethalometers.

4. PM_{2.5} Monitoring Network

4.1 PM_{2.5} SLAMS Network

The TEOM-1405-DF is the primary instrument being used in the state network for PM_{2.5} measurement. The EPA has also designated the TEOM-1405-DF, operating with firmware version 1.70 and later, as a Federal Equivalent Method (FEM) on November 12, 2013 for PM₁₀ and PM_{10-2.5}, (<http://www.gpo.gov/fdsys/pkg/FR-2013-11-12/pdf/2013-27016.pdf>). The Thermo-Fisher 1.71 firmware version has been integrated into the TEOM-1405-DF monitors, and the department is evaluating the performance of the instruments with this firmware for PM₁₀ measurement. Until this evaluation is completed, the PM₁₀ FEM channels from the TEOM-1405-DF instruments are not being reported to AQS. Once the instruments are determined to be successfully operating for these channels, the PM_{10c} and PM₁₀ parameters will provide more temporal and spatial coverage for PM₁₀ in the network.

Network PM_{2.5} collocated FRM requirements were previously satisfied at the Blair Street NCore site in St. Louis and the Troost site in Kansas City. The following page reports the FRM/FEM Comparability statistics (Class III performance criteria of 40 CFR Part 53) for three years of the TEOM-1405-DF (EQPM-0609-182) operating at the Blair Street, St. Louis NCore site. The additive and multiplicative bias meets the Class III performance criteria of 40 CFR Part 53.

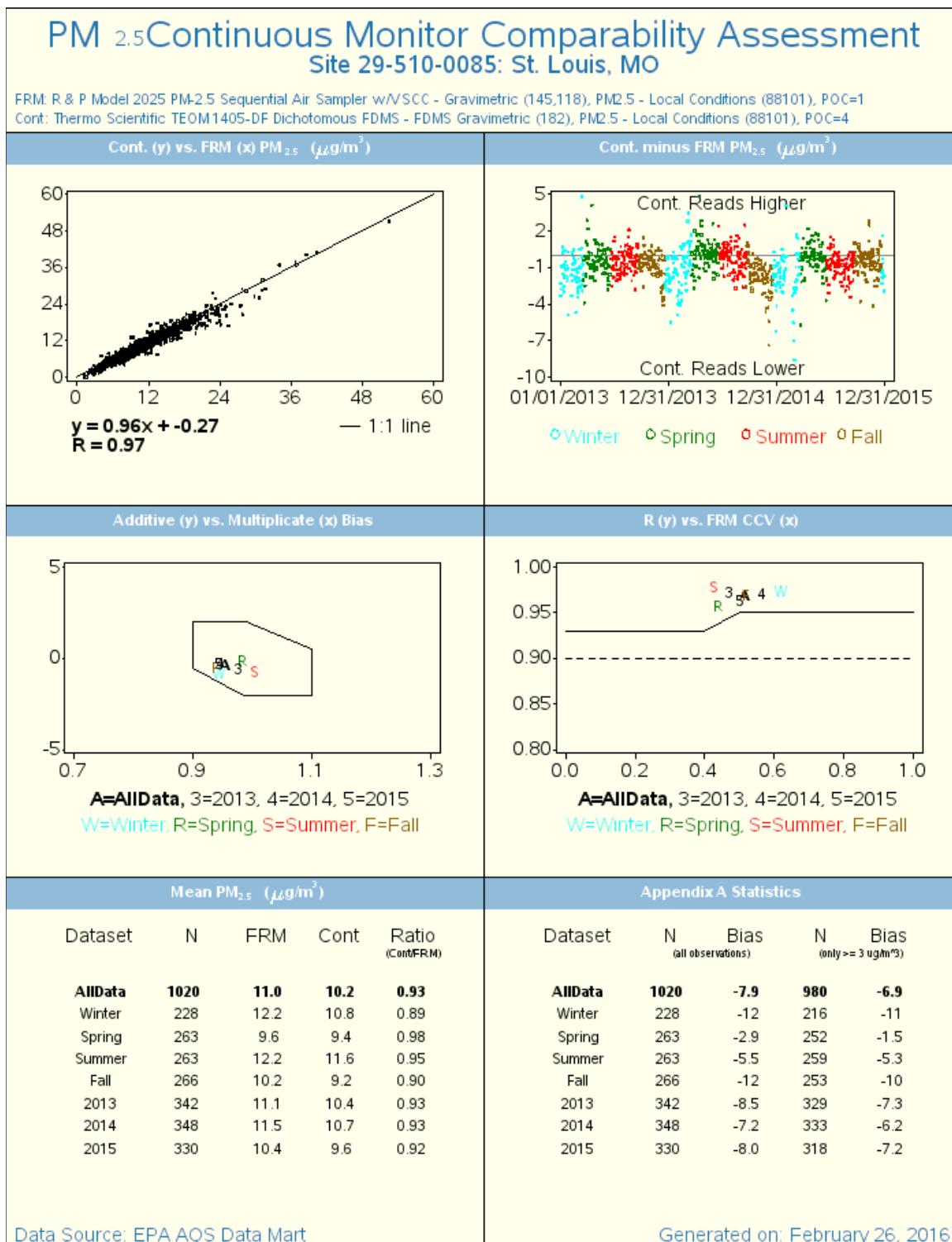
The “Revisions to Ambient Monitoring Quality Assurance and Other Requirements; Final Rule,” Federal Register volume 81, number 59 (March 28, 2016), effective April 27, 2016, removed the requirement for collocated monitoring for PM_{10-2.5} at NCore sites from 40 CFR Part 58. Therefore, operation of the collocated set of filter samplers used for measurement of PM_{10-2.5} filter samplers was discontinued at the Blair Street site. At the same time, the TEOM-1405-DF FEM was re-designated as the primary PM_{2.5} instrument at this site. The FRM PM_{2.5} sampler at Blair Street was re-designated as the collocated reporting FRM sampler for the state network, and also provides PM_{2.5} for the calculation of PM_{10-2.5} and reporting FRM PM_{2.5} for the NCore site. This change allowed the collocated FRM PM_{2.5} sampler at the Troost site to be discontinued. Two FRM PM₁₀ samplers remain at Blair Street: one used to report both PM_{10c} (at local conditions) for calculation of PM_{10-2.5} and PM₁₀ at standard conditions, and a second one which provides collocation for the PM₁₀ measurement. The current PM_{2.5} network is summarized in the table below.

Two TEOM-1405-DF instruments are operated at the St. Joseph Pump Station site, one designated as primary, and one as collocated to satisfy the collocation requirement for that FEM method. The department will continue to operate a 1405-F PM_{2.5} instrument and a collocated FRM at Ladue in part to evaluate the 1405-F for possible additional future use in the network.

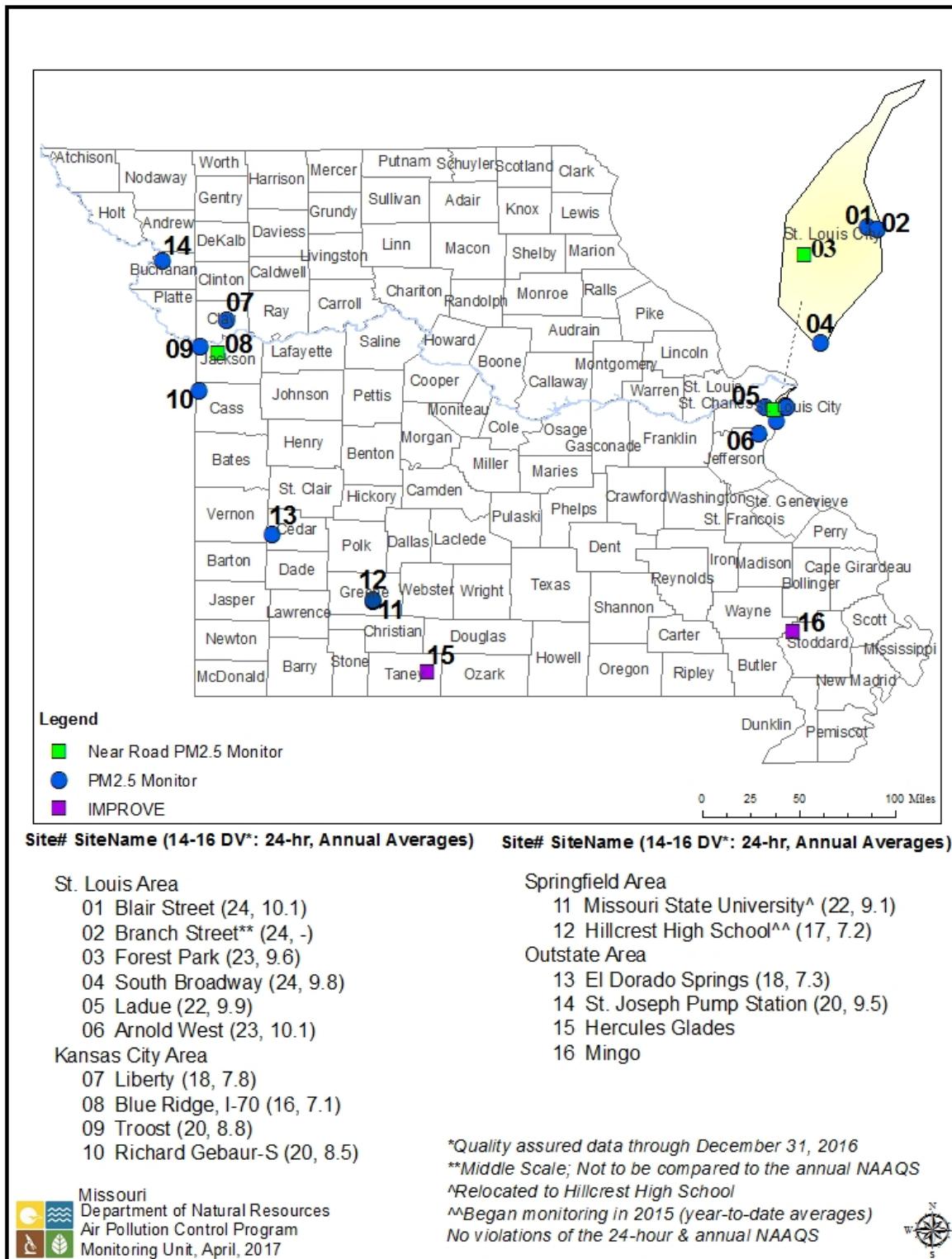
The department also plans to operate a Teledyne API 640x instrument at Blair Street to evaluate this instrument, which measures airborne particulate concentration using light scattering, for possible future use in the network. Procurement and operation of this instrument is subject to availability of funds.

Class III Performance Criteria of 40 CFR Part 53
Blair Street St. Louis Air Quality System # 29-510-0085
TEOM-1405-DF, EQPM-0609-182 (PM_{2.5})
January 2013 through December 2015

Source: EPA AirData PM_{2.5} Continuous Monitor Comparability Assessments



**2017 Missouri PM_{2.5} Monitoring Network*, NAAQS=35 µg/m³ (24 hours),
12 µg/m³ (1 year)**



*A Teledyne API 640 x will be added at Blair St. No other changes to the PM_{2.5} network are proposed in this plan.

4.2 PM_{2.5} Chemical Speciation Network (CSN)

PM_{2.5} speciation sampling is currently being conducted at two locations: Blair Street in St. Louis and Arnold West. The sampling schedule at Arnold West was modified to every six days in February 2015. Sampling continues to be done every three days at Blair Street.

4.3 PM_{2.5} Section 103 Federal Funding

The department is not proposing any changes to the PM_{2.5} monitoring network. However, this is contingent on EPA providing 100% of the federal Section 103 grant funds at historical levels which are used to operate and maintain the PM_{2.5} monitoring network as established. EPA has issued only 65% of the historical Section 103 grant funding levels as of the drafting of this plan. If historical federal section 103 grant funding is not received, the plan will be modified to bring operating expenses in line with the available revenue.

40 CFR 58.14 (c) indicates that “State, or where appropriate, local agency requests for SLAMS monitor station discontinuation, subject to the review of the Regional Administrator, will be approved if any of the following criteria are met and if the requirements of appendix D to this part, if any, continue to be met. Other requests for discontinuation may also be approved on a case-by-case basis if discontinuance does not compromise data collection needed for implementation of a NAAQS and if the requirements of appendix D to this part, if any, continue to be met.” If necessary the following monitors will be considered for discontinuation in accordance with 40 CFR 58.14 (c) in this order proportionally to the amount of funding reduced:

Liberty PM_{2.5}: The monitor meets the removal criteria of 40 CFR 58.14 and has the lowest design value in the Kansas City Missouri network. The minimum PM_{2.5} monitoring requirement of 40 CFR 58 Appendix D is satisfied in the Kansas City area without this monitor. Discontinuance of this monitor would not compromise data collection needed for implementation of the PM_{2.5} NAAQS.

Richards Gebaur South PM_{2.5}: The monitor meets all but one of the removal criteria of 40 CFR 58.14. The Kansas City area minimum PM_{2.5} monitoring requirement of 40 CFR 58 Appendix D is satisfied without this monitor. Although the monitor has greater than 10 percent chance of exceeding 80% of the NAAQS, the monitor has lower annual PM_{2.5} averages over the last three years than monitors in metropolitan areas that have only one PM_{2.5} monitor (e.g. Springfield and St. Joseph). Discontinuance of this monitor would not compromise data collection needed for implementation of the PM_{2.5} NAAQS.

If federal funding reductions are significant and permanent, other cost reduction measures will be evaluated. These include but are not limited to: Additional PM_{2.5} monitor reductions, changes to equipment replacement plans, not evaluating the Teledyne API 640x monitoring method, and reconfiguration of hourly continuous monitoring vs. every six day filter based sampling at some sites. Consistent with 40 CFR 58.14(b) if these reductions become necessary the department will provide written communication describing the network changes to the Regional Administrator for review and approval.

2017 Missouri PM_{2.5} Monitoring Network

Site	Schedule*	Type	Agency	Purpose
St. Louis				
1. Blair Street	3	Collocated FRM	ESP	Doubles as PMcoarse Difference method, Quality Assurance
	3	Speciation	ESP	
	H	TEOM-1405-DF FEM	ESP	24 hr Annual, NAAQS/AQI, Ncore, PM-10-2.5 continuous
	H	T640X PM Mass Monitor FEM	ESP	Method Performance Evaluation Research Not for NAAQS Compliance Determination
2. Branch Street	H	TEOM-1405-DF FEM	ESP	24 hr NAAQS/AQI PM10-2.5 continuous (unique middle scale monitor†)
3. South Broadway	H	TEOM-1405-DF FEM	ESP	24 hr & Annual NAAQS/AQI PM10-2.5 continuous
4. Ladue	H	TEOM-1405-F FEM	ESP	24 hr & Annual NAAQS/AQI
	6	Collocated FRM	ESP	Quality Assurance
5. Arnold West	6	Speciation	ESP	
	H	TEOM-1405-DF FEM	ESP	24 hr & Annual NAAQS/AQI, PM10-2.5 continuous
6. Forest Park (near-roadway)	H	TEOM-1405-DF FEM	ESP	24 hr & Annual NAAQS/AQI, PM10-2.5 continuous (micro scale monitor)
Kansas City				
7. Liberty	H	TEOM-1405-DF FEM	ESP	24 hr & Annual NAAQS/AQI, PM10-2.5 continuous
8. Troost	H	TEOM-1405-DF FEM	ESP	24 hr & Annual NAAQS/AQI, PM10-2.5 continuous
9. Blue Ridge I-70 (near-roadway)	H	TEOM-1405-DF FEM	ESP	24 hr & Annual NAAQS/AQI, PM10-2.5 continuous (micro scale monitor)
10. Richards-Gebau South	H	TEOM-1405-DF FEM	ESP	24 hr & Annual NAAQS/AQI, PM10-2.5 continuous
Springfield				
11. Hillcrest High School	H	TEOM-1405-DF FEM	ESP	24 hr & Annual NAAQS/AQI, PM10-2.5 continuous
St. Joseph				
12. St. Joseph Pump Station	H	TEOM-1405-DF FEM	ESP	24 hr & Annual NAAQS/AQI, PM10-2.5 continuous
	H	Collocated TEOM-1405-DF FEM	ESP	Quality Assurance
Outstate				
13. El Dorado Springs	H	TEOM-1405-DF FEM	ESP	24 hr & Annual NAAQS/AQI, PM10-2.5 continuous
14. Minop	3	IMPROVE	Fish & Wildlife Service	
15. Hercules Glades	3	IMPROVE	Forest Service	
* 3 = Every third day; 6 = Every sixth day; H = Continuous monitoring, hourly data reported.				
† The Branch St. Monitor is a unique middle scale impact site and not eligible for comparison to the Annual PM _{2.5} NAAQS consistent with 40 CFR 58.30.				

5. Ozone Monitoring Network

The Foley monitoring site (site no. 15 in the map below) was relocated before the start of the 2017 ozone monitoring season in March 2017. This change was required for logistical reasons (change in property ownership). The new location is 1.49 kilometers east of the former site and therefore within less than 4 kilometers of the former site and representative of the same air mass (see Figure 5-1). In accordance with the system modification requirements of 40 CFR 58.14(c)(6) and consistent with the discussion of unanticipated network modifications in the Introduction to this document, details of this change were communicated in writing to EPA Region VII staff. The new site is referred to as Foley West (because it is west of the town of Foley) to distinguish it from the former site.

The department proposes to discontinue operation of the Branson ozone monitoring site after the end of the 2017 ozone season, October 31, 2017. The Branson site was established in 2010 and designated as a special purpose monitoring (SPM) station and, therefore, does not require US EPA approval for discontinuation. Nevertheless, the following discussion of monitoring results from that site is presented in support of this decision.

The following table lists the ozone design values measured at Branson for the five most recent three-year periods. None of these design values shows violation of the 0.070 ppm (70 ppb) ozone primary NAAQS. The Branson monitor measured the lowest design value of all the ozone monitors in the state in 2014-2016, and it is not needed to fulfill network requirements.

Time Period	Ozone Design Value, ppb (3-year average of annual 4 th highest daily 8-hour average concentration)
2010-2012	70
2011-2013	68
2012-2014	64
2013-2015	60
2014-2016	57

The average of these design values is 63.8 ppb.

Calculation of the upper bound of the 90 percent confidence interval based on the five design values listed in the table (following the procedure described in Section 4.1 of *AMBIENT AIR MONITORING NETWORK ASSESSMENT GUIDANCE, Analytical Techniques for Technical Assessments of Ambient Air Monitoring Network*, EPA-454/D-07-001, 2007) results in a value of 68.9 ppb, which exceeds 80 percent of the level of the NAAQS (56) and so does not meet the requirement in 40 CFR 58.14 c for discontinuation of a SLAMS site if this procedure is applied. However, this result does not apply to SPM monitors and does not take into account the consistent decrease in design values.

Figure 5-2 shows a time-series plot of these design values. The straight line in the figure is a linear regression fit to the data, and the data are fit well by a straight line. If the linear fit to the data is extrapolated to a sixth three-year period (2015-2017), the predicted design value for that period is 53.6 ppb, which remains below the level of the NAAQS. Of course, the linear

decreasing trend cannot continue indefinitely, but the monotonically decreasing design values suggest that the decreasing trend will continue for some time, and the design value at this site would be expected to remain below the level of the NAAQS. Also, the excellent linear fit suggests that the width of the 90 percent confidence interval would be considerably less than that estimated above that only considers the average and does not take into account the decreasing trend.

There are no other planned changes to the ozone monitoring network, and ozone monitoring will continue to be conducted all year at the Mark Twain State Park (MTSP) site to collect ozone background concentrations need for PSD modeling projects and at Blair Street to meet the NCore ozone monitoring requirement. The current monitoring network is based on the current ozone standard and ground-level ozone air quality monitoring network design requirements. The current ozone monitoring network meets the population-based requirements in 40 CFR 58 Appendix D, which requires a minimum of two sites each in the St. Louis, Kansas City, and Springfield areas. The ozone monitoring requirement for the Fayetteville-Springdale-Rogers CBSA is met by two ozone monitoring sites in Arkansas, which is reasonable, since 96 percent of the population of that CBSA is in Arkansas and only 4 percent in Missouri.

Reduction of the ozone NAAQS to 70 ppb was published in the Federal Register in October 2015, effective in December 2015. That change also included extension of the ozone monitoring season in Missouri to include the month of March and a requirement for photochemical assessment monitoring stations (PAMS) at NCore sites in nonattainment areas starting in 2019. See Section 9 below for the PAMS implementation plan.

Figure 5-1. Aerial photograph showing the locations of the former (west end of line) and current (east end of line) Foley monitoring sites.

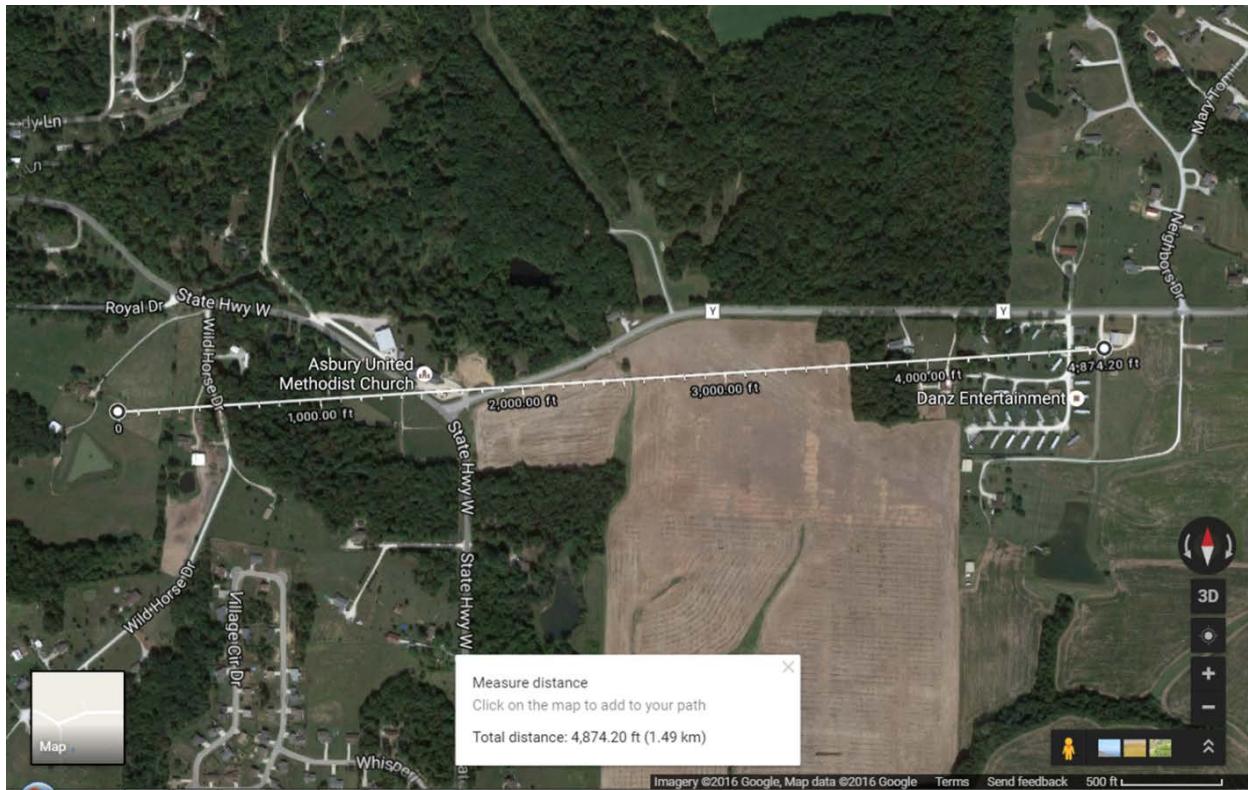
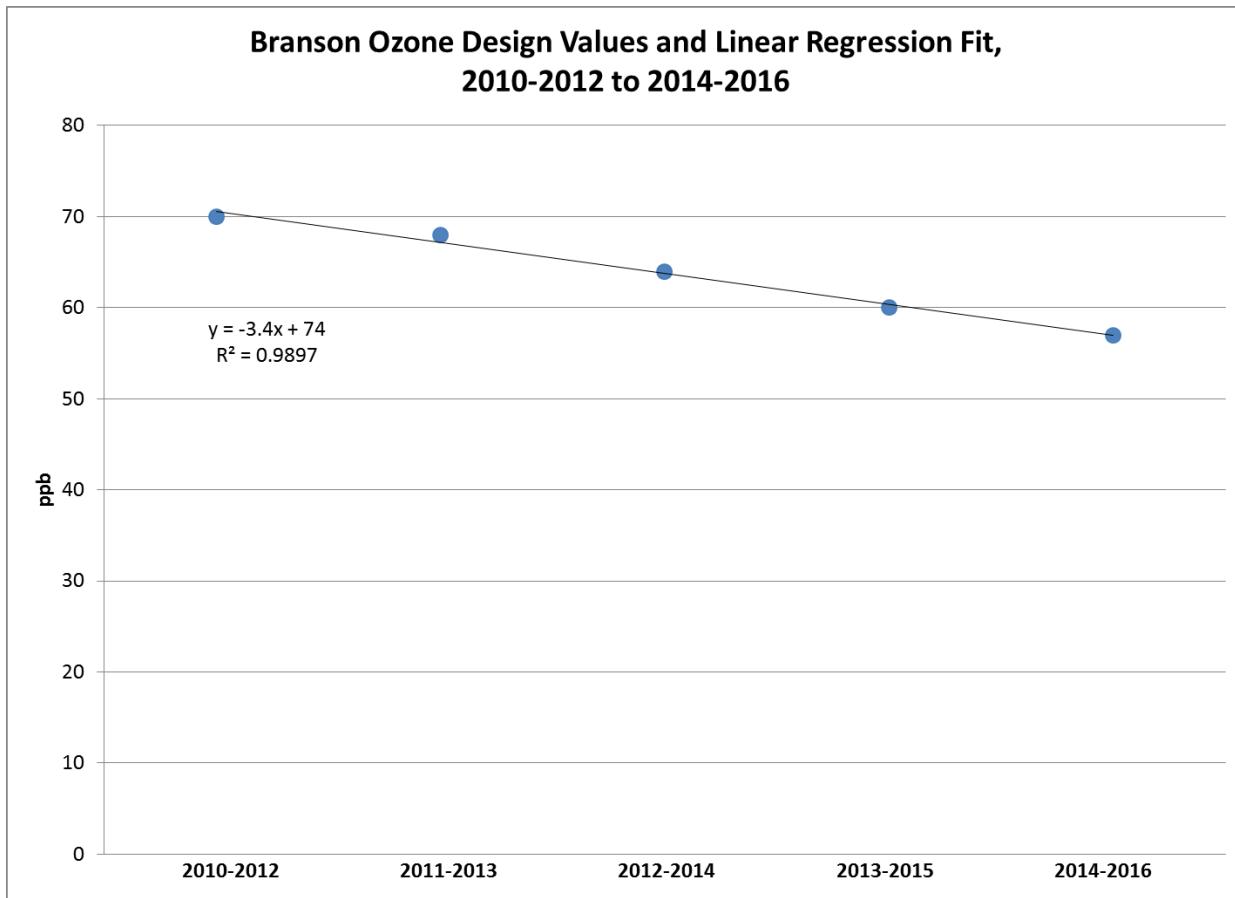
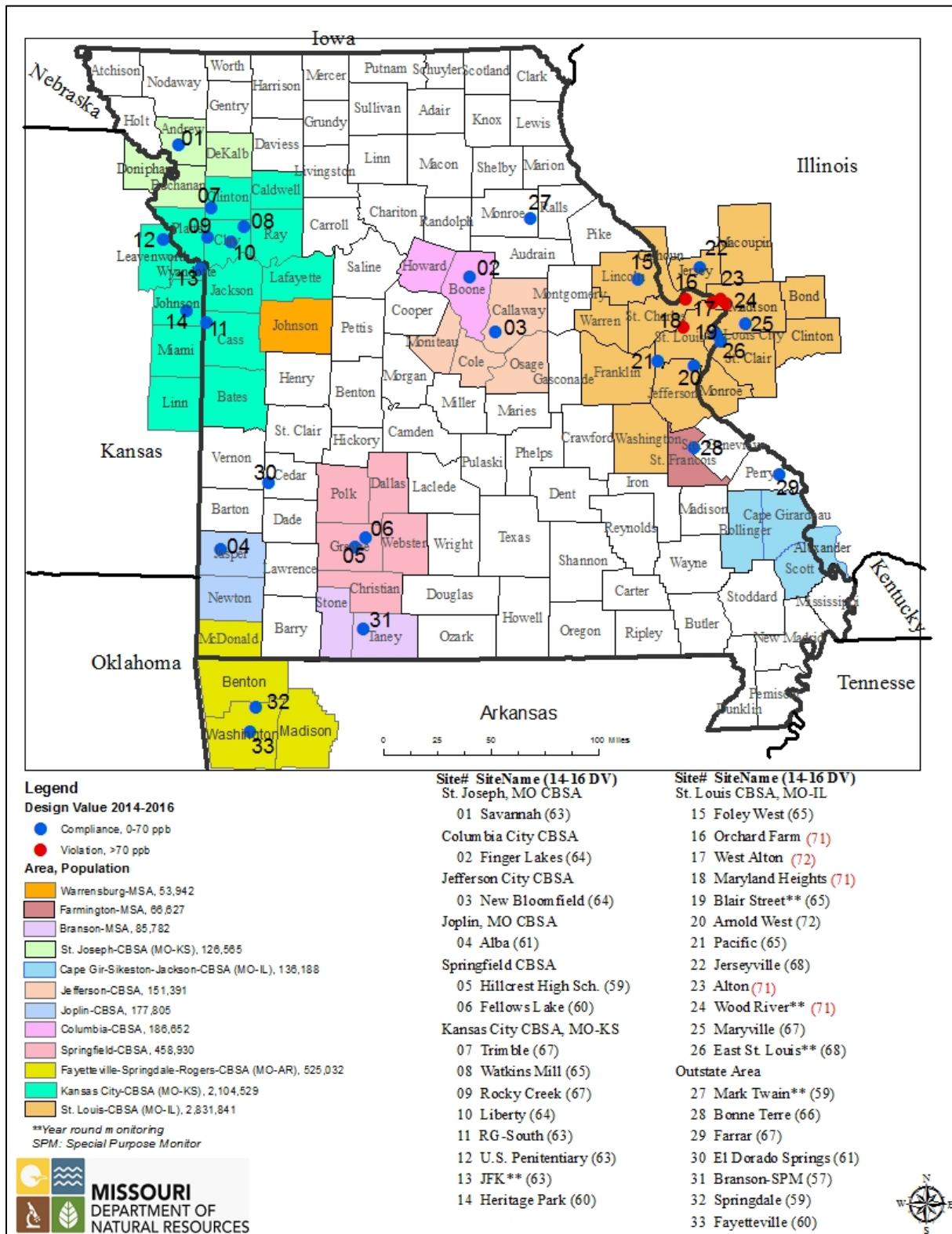


Figure 5-2.



2017 Missouri Ozone (O₃) Monitoring Network*, NAAQS=70 ppb (8 hour)



*Foley was relocated to Foley West before the start of 2017 O₃ monitoring. Branson is proposed for discontinuation at the end of the 2017 O₃ season. No other changes to the O₃ network are proposed in this plan.

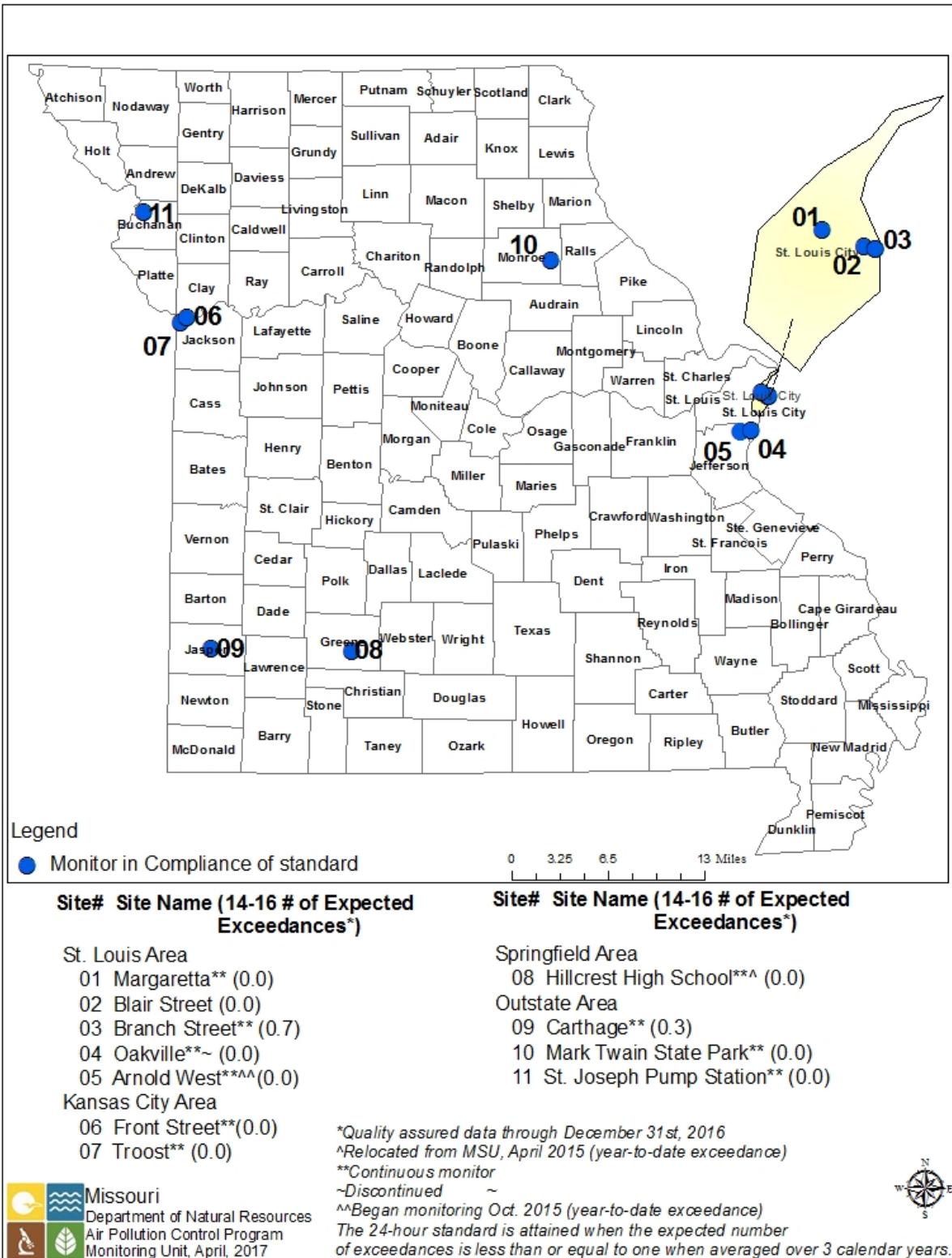
6. PM₁₀ Monitoring Network

As discussed in Section 4, the TEOM-1405-DF monitor has the capability of reporting PM₁₀ along with the PM_{2.5} FEM measurements. The 1.71 firmware version has been integrated into the TEOM-1405-DF instruments, and the department is evaluating the performance of the monitors for PM₁₀ measurement through data analysis. Once the PM₁₀ data from these instruments is determined to be acceptable, the number of continuous PM₁₀ monitors comparable to the NAAQS will increase by three (3) sites to include Blair Street, Ladue, and South Broadway in the St. Louis area. This will bolster the count of PM₁₀ monitors in this CBSA to a total count of nine (9) monitors, more than enough to meet the minimum monitoring requirements specified in 40 CFR 58 Appendix D §4.6 (not including the microscale Forest Park site). The PM₁₀ minimum monitoring requirement in the Kansas City CBSA is also being met currently by the Troost and Front Street sites in Missouri and the JFK site in Kansas. Pending successful integration of the 1.71 firmware into the TEOM 1405 DF's, the TEOM 1405 DF PM₁₀ FEM channel can also be used for PM₁₀ NAAQS compliance reporting at Hillcrest, Troost, St. Joseph Pump Station, Arnold West, and Branch Street. This would allow us to eventually replace the TEOM-1400ab instruments at Hillcrest, Branch St., and Arnold West and the TEOM 1405 instruments at Troost and St. Joseph Pump Station.

The 2016 estimated population of the Fayetteville-Springdale-Rogers CBSA is 525,032, but only 4 percent of this population (22,620) is in Missouri. Therefore, the PM₁₀ monitoring requirement for this area should be met by establishment of a monitoring site in Arkansas, and we understand through correspondence from the Arkansas Department of Environmental Quality that such a site has been established as of January 1, 2017.

A collocated PM₁₀ TEOM-1400ab monitor was installed at the Carthage site in April 2016. The PM₁₀ low volume samplers at Troost and St. Joseph Pump Station have been replaced with TEOM 1405 instruments. This leaves only the Blair Street site with a low-volume filter-based PM₁₀ sampler and a collocated low-volume filter-based PM₁₀ sampler, which meets the collocation requirement.

2017 Missouri PM₁₀ Monitoring Network*, NAAQS=150 µg/m³ (24 hour)



*No changes to the PM₁₀ network are proposed in this plan.

7. Nitrogen Dioxide (NO₂) Monitoring Network

Requirements for near-roadway NO₂ monitoring are being met in the St. Louis area by the Forest Park I-40/64 and Rider Trail 1-70 monitoring sites. The requirement for near roadway NO₂ monitoring in the Kansas City area is being met by the Blue Ridge I-70 site. The community-wide monitoring network requirement of 40 CFR 58 Appendix D, 4.3.3(a) is satisfied by the existing Troost and Margaretta monitoring sites.

EPA has identified the Margaretta NO₂ site as one of the minimum of forty additional NO₂ monitoring stations nationwide in any area, inside or outside of CBSAs, above the minimum monitoring requirements, with a primary focus on siting these monitors in locations to protect susceptible and vulnerable populations. This requirement is the responsibility of the respective Regional Administrators working with their respective states consistent with 40 CFR 58 Appendix D, 4.3.4(a). For additional information about this topic consult the following EPA website resource: <http://www.epa.gov/ttn/amtic/svpop.html>

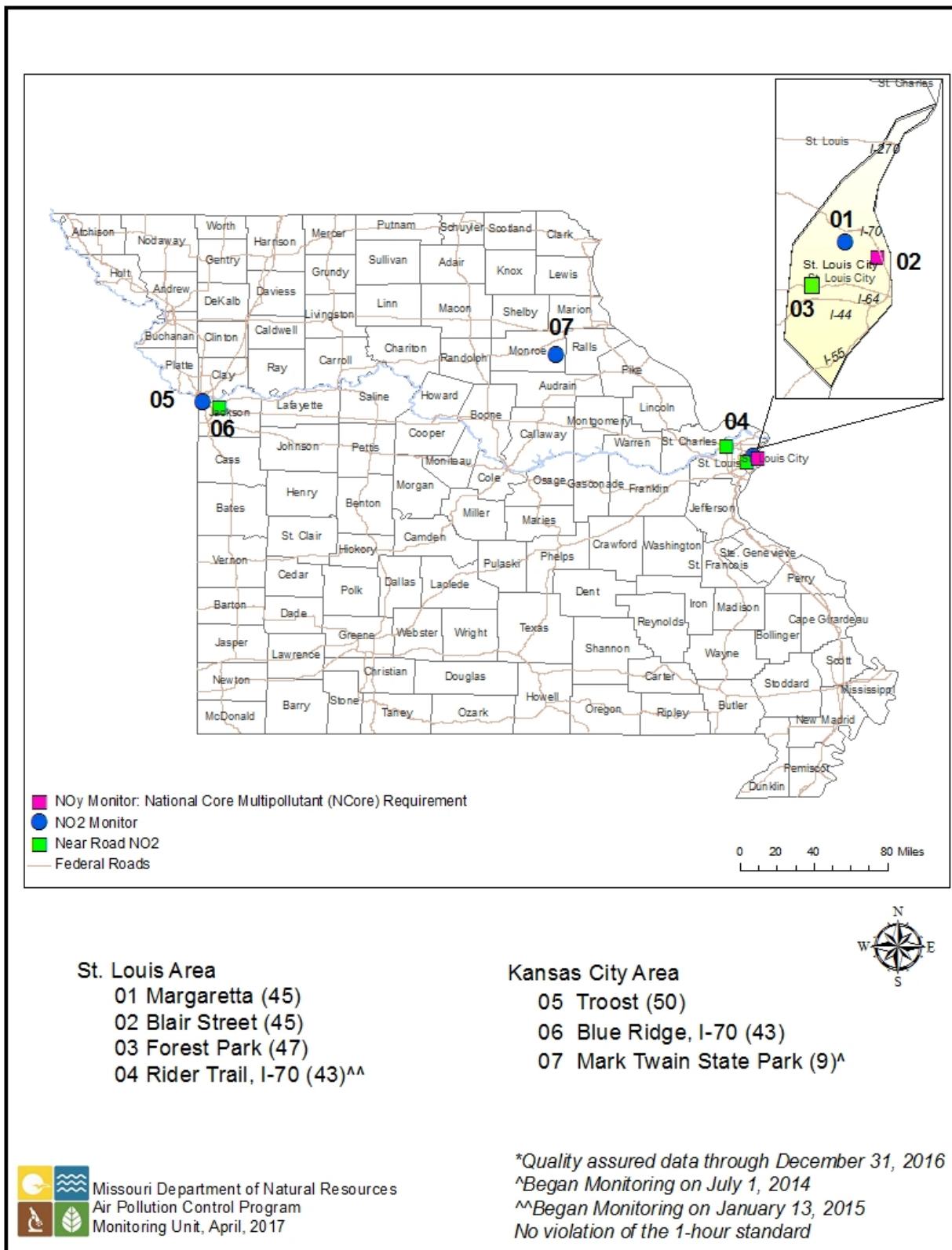
The department added, in 2013, photolytic NO₂ monitors at the Blair Street NCore site and the Forest Park near-roadway site in St. Louis. Now that the evaluation project is complete, the photolytic NO₂ instrument from Forest Park has been moved to Blair Street and is the primary instrument. The Blair instrument is now a backup to the primary. Photolytic NO₂ monitoring is identified in EPA's long term monitoring strategy, and this monitoring supplement the required NO_Y monitoring being conducted at the NCore site.

7.1 NO₂ Near-Roadway Monitoring

The final rule published in 2010 revising the NAAQS to add the 1-hour standard of 100 ppb (3-year average of annual 98th percentile) requires near-road NO₂ monitoring at two sites in the St. Louis CBSA (population 2.8 million) and one site in the Kansas City CBSA (population 2.0 million), based on population and traffic count. Sites were to be identified in the 2012 air monitoring network plan and begin operation by 1/1/2013. The schedule was revised in a rulemaking published in 2013 that required the first St. Louis area near-road site to begin operation in January 2014, the Kansas City area site to begin operation in January 2014, and the second St. Louis area site to begin operation in January 2015. Due in part to receipt of EPA funding for establishment of near-road sites, the department established the first St. Louis area site in January 2013, and the Kansas City area site was established in July 2013. The second near-roadway site in the St. Louis area was established in January 2015. The site selection process was described in the 2013 Monitoring Network Plan, <http://dnr.mo.gov/env/apcp/2013monitoringnetworkplan.pdf>.

The first St. Louis area near-roadway site, Forest Park, is located adjacent to I-64 west of downtown St. Louis. Air monitoring results at that site are consistent with commuter traffic, heaviest on weekday mornings. The second St. Louis area site, called Rider Trail S. I-70, is adjacent to Interstate 70 just west of Interstate 270. Interstate 70 extends across the United States and carries through traffic in addition to commuter traffic and other local traffic. Therefore, the fleet mix and congestion patterns relative to time of day and day of the week are expected to be different than at the first site.

**2017 Missouri Nitrogen Dioxide (NO₂) Monitoring Network*, NAAQS=100 ppb (1 hour)
(2014-2016 Design Values)**

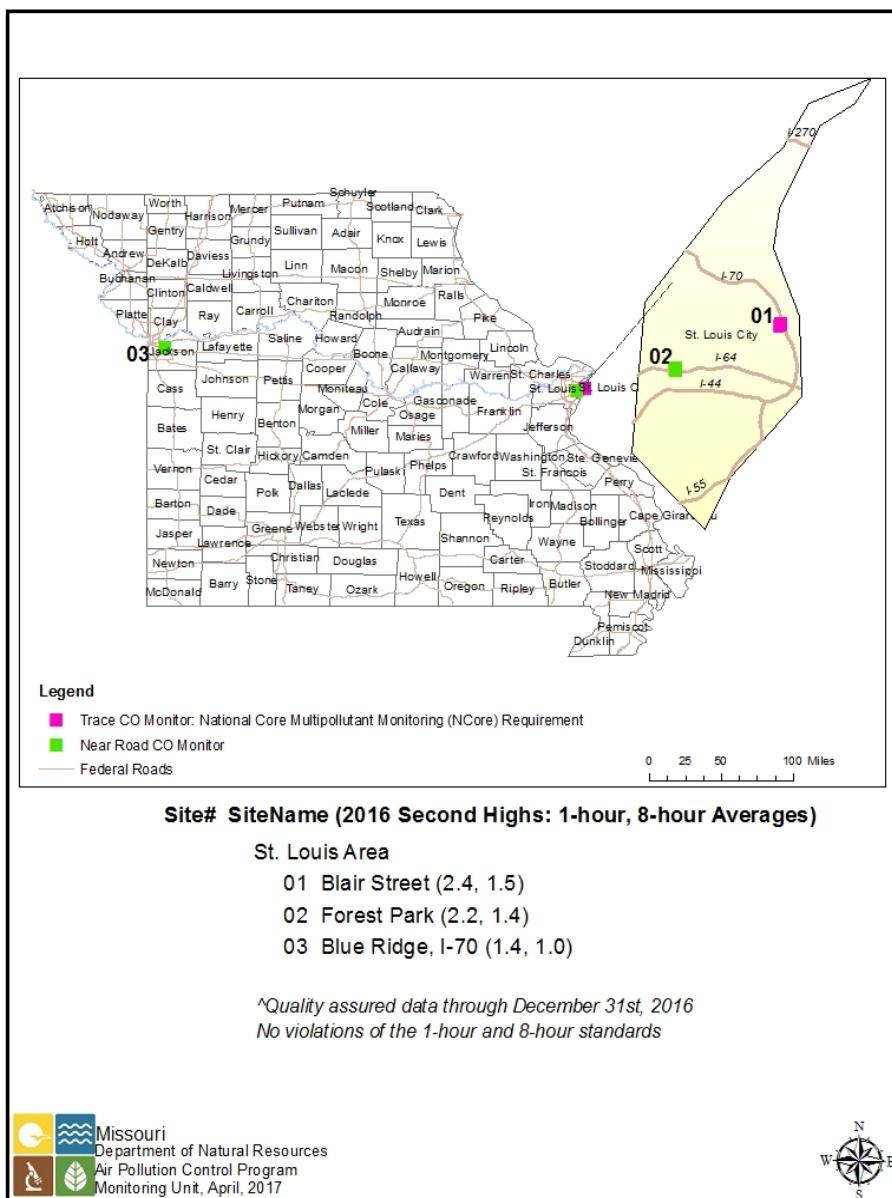


*No changes to the NO₂ network are proposed in this plan.

8. Carbon Monoxide (CO) Monitoring Network

On August 12, 2011, the EPA issued a decision to retain the existing NAAQS for CO. A final rule published on August 31, 2013 requires near-road CO monitoring at one site in the St. Louis CBSA by 1/2015 and one site in the Kansas City CBSA by 1/2017. The department established CO monitoring sites at the same time as the NO₂ monitoring sites at the Forest Park I-40/64 and Blue Ridge I-70 near-roadway monitoring sites. No changes to the CO monitoring network are proposed in this plan.

2017 Missouri Carbon Monoxide (CO) Monitoring Network*, NAAQS=35 ppm (1 hour, 9 ppm (8 hour)



*No changes to the CO network are proposed in this plan.

9. Photochemical Assessment Monitoring Station Implementation Plan

9.1 Introduction: Regulatory Requirements and Guidance Documents

The “National Ambient Air Quality Standards for Ozone; Final Rule,” Federal Register, 80, 206 (October 26, 2015), included amendment of 40 CFR, Part 58, Appendix D (5) to include the following:

“5. NETWORK DESIGN FOR PHOTOCHEMICAL ASSESSMENT MONITORING STATIONS (PAMS) AND ENHANCED OZONE MONITORING

- (a) State and local monitoring agencies are required to collect and report PAMS measurements at each NCORE site required under paragraph 3(a) of this appendix located in a CBSA with a population of 1,000,000 or more, based on the latest available census figures.
- (b) PAMS measurements include:
 - (1) Hourly averaged speciated volatile organic compounds (VOCs);
 - (2) Three 8-hour averaged carbonyl samples per day on a 1 in 3 day schedule, or hourly averaged formaldehyde;
 - (3) Hourly averaged O₃;
 - (4) Hourly averaged nitrogen oxide (NO), true nitrogen dioxide (NO₂), and total reactive nitrogen (NOy);
 - (5) Hourly averaged ambient temperature;
 - (6) Hourly vector-averaged wind direction;
 - (7) Hourly vector-averaged wind speed;
 - (8) Hourly average atmospheric pressure;
 - (9) Hourly averaged relative humidity;
 - (10) Hourly precipitation;
 - (11) Hourly averaged mixing-height;
 - (12) Hourly averaged solar radiation; and
 - (13) Hourly averaged ultraviolet radiation...
- (g) At a minimum, the monitoring agency shall collect the required PAMS measurements during the months of June, July, and August.”

The same rule included amendment of 40 CFR, Part 58.10 (a) (10) to include the following:

“A plan for making Photochemical Assessment Monitoring Stations (PAMS) measurements, if applicable, in accordance with the requirements of appendix D paragraph 5(a) of this part shall be submitted to the EPA Regional Administrator no later than July 1, 2018. The plan shall provide for the required PAMS measurements to begin by June 1, 2019.”

The US EPA has published a guidance document entitled “PAMS Required Sites Quality Assurance Implementation Plan [QAIP],” October 2016, https://www3.epa.gov/ttn/amtic/files/ambient/pams/PAMS%20Quality%20Assurance%20Implementation%20Plan_092716_V4.0.pdf. The QAIP provides guidance for both US EPA and monitoring organizations in implementation of the above-referenced PAMS requirements. The QAIP includes the following recommendations:

“Monitoring organization PAMS Implementation Plan: The monitoring organization Implementation Plan document will specify how the monitoring organization will perform the measurements for the Required Network. The plan will include details on activities such as monitoring site location, costs, and schedule of events, among other information. The plan will also include any waivers to siting or monitoring methods.” (page 13)

“Monitoring organizations should have their PAMS waivers and Required Network Implementation Plans finalized by July 2017 and must have them completed by the end of October 2017.²⁰

²⁰ The regulation requires that monitoring organization Required Network IPs be developed in their Annual Network Plans due July 2018. However, in order to be operational by June 2019, it would be beneficial to have plans finalized by the end of October 2017.” (page 21)

US EPA is also developing additional guidance including a PAMS Technical Assistance Document (TAD), standard operating procedures for some of the instrument systems, and either a national Quality Assurance Project Plan (QAPP) or model QAPP for monitoring organizations. US EPA also conducts monthly conference calls to disseminate information and guidance on PAMS monitoring.

This section of the 2017 Monitoring Network Plan is intended to fulfill the regulatory requirement in 40 CFR, Part 58.10 (a) (10) for submittal of a PAMS implementation plan by July 2018 and to meet the recommended schedule in the QAIP for submittal of the plan by July 2017 in advance of the regulatory requirement. An updated version of this plan will also be included in the 2018 Monitoring Network Plan. That plan will include any changes resulting from revision in regulatory requirements, additional guidance or planning documents from US EPA, and other additional developments in preparation and planning for PAMS monitoring during the year between Monitoring Network Plans.

9.2 PAMS Measurements

MoDNR will conduct PAMS monitoring at the Blair Street Station in St. Louis. The Blair Street Station is an NCore site in a CBSA with a population of greater than 1,000,000. The NCore site in the Kansas City CBSA is in Kansas City, Kansas. Accordingly, we expect that PAMS monitoring in the Kansas City CBSA will be conducted by the state or local agency responsible for operation of that site.

PAMS monitoring will begin at Blair Street in June 2019 and will be conducted during the months of June, July, and August each year as long as the regulatory requirements are in place and funding is available to support this activity.

MoDNR does not plan to request any of the waivers from US EPA described in 40 CFR, Part 58, Appendix D (5) (c) through (f).

Each of the required measurements in 40 CFR, Part 58, Appendix D (5) (b) is discussed below.

1. Hourly averaged speciated volatile organic compounds (VOCs). US EPA has evaluated several gas chromatographs (GC) designed to measure concentrations of hourly average speciated VOCs. US EPA plans to develop national contracts with up to three of the vendors of these GC systems and provide an instrument from one of the vendors to each monitoring organization that is required to conduct PAMS monitoring. Based on information available at this time, MoDNR expects to select either the Markes Unity-XR Thermal Desorber with Agilent 7890B Auto-Gas Chromatograph with Flame Ionization Detection or the Consolidated Analytical Systems (CAS)/Chromatotec AirmOzone Auto-Gas Chromatograph with Flame Ionization Detection. Use of either of these systems will also require procurement and installation of additional equipment and supplies, including a sampling manifold, zero air supply, gas dilution calibrator, calibration gas and associated regulators, and data logger. This list will be refined and become more detailed as more information becomes available and after the specific VOC instrument system is selected. This element of the required PAMS measurements is clearly the one that will require the most planning and preparation and will be the most labor-intensive during each summer measurement season.

The table below lists target compounds for this measurement (carbonyl compounds included in the table will be measured in samples described under 2 below).

2. Three 8-hour averaged carbonyl samples per day on a 1 in 3 day schedule, or hourly averaged formaldehyde. We will procure, install, and utilize a sampler capable of collecting multiple 8-hour samples using derivatized sorbent tubes according to EPA method TO-11A. An example of such a sampler is the ATEC 8000 series. We are not aware of an instrument currently available at reasonable cost that reliably measures hourly-averaged formaldehyde; this requirement was likely written into the regulation in anticipation of future instrument development. We expect that analysis of TO-11A samples for the carbonyls listed in the table below (identified by footnote c) will be made available by US EPA using their national contract analytical laboratory.

PAMS Target Compound List

Priority Compounds		Optional Compounds	
1	1,2,3-trimethylbenzene ^a	1	1,3,5-trimethylbenzene
2	1,2,4-trimethylbenzene ^a	2	1-pentene
3	1-butene	3	2,2-dimethylbutane
4	2,2,4-trimethylpentane ^b	4	2,3,4-trimethylpentane
5	acetaldehyde ^{b,c}	5	2,3-dimethylbutane
6	acetone ^{c,d}	6	2,3-dimethylpentane
7	benzene ^{a,b}	7	2,4-dimethylpentane
8	c-2-butene	8	2-methylheptane
9	ethane ^d	9	2-methylhexane
10	ethylbenzene ^{a,b}	10	2-methylpentane
11	ethylene	11	3-methylheptane
12	formaldehyde ^{b,c}	12	3-methylhexane
13	isobutane	13	3-methylpentane
14	isopentane	14	acetylene
15	isoprene	15	c-2-pentene
16	m&p-xylenes ^{a,b}	16	cyclohexane
17	m-ethyltoluene ^a	17	cyclopentane
18	n-butane	18	isopropylbenzene ^b
19	n-hexane ^b	19	m-diethylbenzene
20	n-pentane	20	methylcyclohexane
21	o-ethyltoluene ^a	21	methylcyclopentane
22	o-xylene ^{a,b}	22	n-decane
23	p-ethyltoluene ^a	23	n-heptane
24	propane	24	n-nonane
25	propylene	25	n-octane
26	styrene ^{a,b}	26	n-propylbenzene ^a
27	toluene ^{a,b}	27	n-undecane
28	t-2-butene	28	p-diethylbenzene
		29	t-2-pentene
		30	α/β -pinene
		31	1,3 butadiene ^b
		32	benzaldehyde ^c
		33	carbon tetrachloride ^b
		34	ethanol
		35	tetrachloroethylene ^b

Source: Revisions to the Photochemical Assessment Monitoring Stations Compound Target List, US EPA, November 20, 2013

^a Important SOAP (Secondary Organic Aerosols Precursor) Compounds

^b HAP (Hazardous Air Pollutant) Compounds

^c Carbonyl compounds

^d Non-reactive compounds, not considered to be VOC for regulatory purposes

3. Hourly Averaged O₃. Hourly averaged ozone is already measured at Blair Street as a part of the NCORE requirements and will continue.

4. Hourly averaged nitrogen oxide (NO), true nitrogen dioxide (NO₂), and total reactive nitrogen (NO_y). NO and NO_y are already measured at Blair Street as a part of the NCORE requirements and will continue. True NO₂ is already measured at Blair Street using an analyzer with a photolytic NO₂ converter; this measurement will also continue.

5. -10. Hourly averaged ambient temperature, hourly vector-averaged wind direction, hourly vector-averaged wind speed, hourly average atmospheric pressure, hourly averaged relative humidity, and hourly precipitation. Temperature, wind direction, wind speed, atmospheric pressure, and relative humidity are already measured at Blair Street and will continue. We will procure, install, and utilize a precipitation measurement instrument.

11. Hourly averaged mixing height. US EPA plans to develop a national contract with one or more vendors of ceilometers, which are instruments using a laser to measure mixing height, and provide an instrument to each monitoring organization that is required to conduct PAMS monitoring. Based on information available at this time, MoDNR expects that the ceilometer to be installed and utilized is likely to be a Vaisala CL-51 with appropriate software.

12. Hourly averaged solar radiation. Solar radiation is already measured at Blair Street and will continue.

13. Hourly averaged ultraviolet radiation. We will procure, install, and utilize an ultraviolet radiation measurement instrument.

9.3 PAMS Implementation Schedule and Resource Requirements

The following table lists some of the major schedule elements associated with implementation of PAMS measurement and tentative starting and ending dates (month and year) for each activity. It is based on the QAIP referenced above and associated information from US EPA, and includes relevant activities planned by US EPA. As noted in the table, timing of some of the schedule elements, especially capital equipment acquisition, depends on availability of funding and/or availability of instrumentation from national contracts; if the availability of funding or of instrumentation from national contracts is delayed, other schedule elements will be delayed, and startup of sampling in June 2019 could be jeopardized.

Personnel resource and cost estimates for this activity are being developed by MoDNR and will be communicated separately to US EPA Region 7 staff.

Tentative PAMS Implementation Schedule

	Start	Finish
QA Related Tasks		
EPA: PAMS TAD and Auto GC SOPs and workgroup review/iteration/comment	2/17	7/17
EPA: PAMS generic QAPP and SOPs (NO ₂ , ceilometer, carbonyl sampling/analysis) and review/iteration/comment	7/17	12/17
EPA: PAMS proficiency testing (PT) and TSA program development and review/iteration/comment	11/17	4/18
EPA: Development of quality control/PT reports	4/18	9/18
MoDNR: Draft PAMS QAPP and SOPs	12/17	8/18
EPA (Region 7): Review QAPP and SOPs	8/18	10/18
MoDNR: Finalize QAPP and SOPs	11/18	2/19
EPA: TSA audit training/readiness reviews	10/18	3/19
EPA: Proficiency testing on operational sites/labs	10/18	5/19
Implementation Tasks		
MoDNR: Implementation plan development (this plan)	1/17	6/17
MoDNR: Personnel resource and cost estimate planning and development	1/17	12/17
MoDNR: Continue to participate in monthly PAMS conference calls and review guidance documents as available	1/17	5/19
EPA and MoDNR: Capital equipment acquisition from national contract (GC and ceilometer; depends on EPA schedule)	11/17	4/18
MoDNR: Other equipment and supplies acquisition (depends on funding availability)	7/17	4/18
MoDNR: Equipment installation	4/18	10/18
MoDNR: Equipment shakedown/testing	4/18	5/19
MoDNR: First PAMS measurement season	6/19	8/19

NETWORK DESCRIPTION/COMPONENTS

See Appendix 1 for the Network Description, which includes the following components.

Site Data

All ambient air monitoring sites are recorded in the EPA's Air Quality System database. Data includes location data such as latitude & longitude.

Air Quality System Site Code

The site code includes a numerical designation for State, county, and individual site. The state and county codes are assigned a number based on the alphabetical order of the State or county. Site numbers are assigned sequentially by date established in most counties. St. Louis County sites also have a division for municipality within St. Louis County.

Street Address

The official Post Office address of the lot where the monitors are located. Because not all sites are located in cities or towns, the street address is occasionally given as the intersection of the nearest streets or highways.

Geographical Coordinates

The coordinate system used by Missouri Department of Natural Resources is latitude and longitude.

Air Quality Control Region

Air Quality Control Regions, or AQCR, are defined by EPA and designates either urban regions, like St. Louis or Kansas City, or rural sections of a state, such as northeast or southwest Missouri.

<u>AQCR</u>	<u>AQCR Name</u>
070	Metropolitan St. Louis
094	Metropolitan Kansas City
137	Northern Missouri
138	SE Missouri
139	SW Missouri

Core Based Statistical Area

Core Based Statistical Areas, or CBSA are defined by the U.S. Census Bureau.

<u>CBSA Code</u>	<u>CBSA Name</u>
00000	Not in a CBSA
16020	Cape Girardeau-Jackson, MO-IL
17860	Columbia, MO
27620	Jefferson City, MO
27900	Joplin, MO
28140	Kansas City, MO-KS
41140	St. Joseph, MO-KS
41180	St. Louis, MO-IL

44180 Springfield, MO

Monitor Data

Each monitor is designed to detect a specific chemical pollutant or group of related pollutants. A site may have one or many monitors and not all sites will have the same monitors.

Pollutant

The common name of the pollutant. “Criteria” pollutants are defined by statute in the Clean Air Act.

Air Quality System Pollutant Code

Each pollutant has a specific numerical code to distinguish it from others.

<u>Pollutant Code</u>	<u>Pollutant</u>
14129	Lead – Local Conditions
42101	Carbon Monoxide
42401	Sulfur Dioxide
42406	Sulfur Dioxide 5-min
42600	Reactive Oxides of N (NOY)
42601	Nitric Oxide
42602	Nitrogen Dioxide
42603	Oxides of Nitrogen
44201	Ozone
61103	Resultant Wind Speed
61104	Resultant Wind Direct
62101	Outdoor Temperature
62107	Indoor Temperature
62201	Relative Humidity
63301	Solar Radiation
64101	Barometric Pressure
68105	Average Ambient Temperature
68108	Sample Baro Pressure
81102	PM ₁₀
88313	Black Carbon-Local Condition
85101	PM ₁₀ - LC
85129	Lead PM10 LC - FRM/FEM
86101	PMCoarse - LC (FRM Diff)
88101	PM _{2.5} FRM
88500	PM _{2.5} Tot Atmospheric
88502	PM _{2.5} AQI/Speciation
88503	PM _{2.5} Reference
61106	Sigma Theta
62106	Temperature Difference
65102	Precipitation
88314	UV Carbon PM2.5-Local Condition

85102	Antimony
85103	Arsenic PM10 LC
85107	Barium PM10 LC
85109	Bromine PM10 LC
85110	Cadmium PM10 LC
85111	Calcium PM10 LC
85112	Chromium PM10 LC
85113	Cobalt PM10 LC
85114	Copper PM10 LC
85126	Iron PM10 LC
85128	Lead PM10 LC
85132	Manganese PM10 LC
85136	Nickel PM10 LC
85142	Mercury PM10 LC
85154	Selenium PM10 LC
85160	Tin PM10 LC
85161	Titanium PM10 LC
85164	Vanadium PM10 LC
85166	Silver PM10 LC
85167	Zinc PM10 LC
85173	Thallium PM10 LC
85180	Potassium PM10 LC
88160	Tin PM10 LC
88305	OC CSN Unadj PM2.5 LC TOT
88312	Total Carbon PM2.5 LC TOT
88316	Optical EC PM2.5 LC TOT

Parameter Occurrence Code

The Parameter Occurrence Code (POC) distinguishes between different monitors for the same pollutant, most often collocated monitors used for precision and quality assurance. For PM_{2.5}, different parameter occurrence codes are assigned to FRM, collocated FRM, continuous, and speciation monitors.

Collocated

Collocated monitors are used for precision and quality assurance activities, and for redundancy for critical pollutants such as ozone.

Sampling Frequency

Sampling frequency varies for each pollutant, depending on the nature of the NAAQS standard and the technology used in the monitoring method. Most gaseous pollutants, PM_{2.5} and PM₁₀ monitors use continuous monitoring FEM methods and are averaged over

one hour. Some particulate pollutants are filter-based FRM methods and averaged over one day.

Scale of Representation

Each monitor is intended to represent an area with similar pollutant concentration. The scales range from only a few meters to many kilometers.

- MIC** Microscale - defines the concentration in air volumes associated with area dimensions ranging from several meters up to about 100 meters.
- MID** Middle - defines the concentration typical of areas up to several city blocks in size with dimensions ranging from about 100 meters to 0.5 kilometers.
- NBR** Neighborhood - defines concentrations within an extended area of a city that has relatively uniform land use with dimensions in the 0.5 to 4.0 kilometers.
- URB** Urban - defines an overall citywide condition with dimensions on the order of 4 to 50 kilometers.
- REG** Regional - defines air quality levels over areas having dimensions of 50 to hundreds of kilometers.

Monitor Type

The monitor's administrative classification as determined by the purpose for the monitor in the agency sampling strategy. Assignment of monitor types "NCORE" and "PAMS" is limited to EPA Headquarters and is done only after a complete review and approval is done for all site/monitor metadata.

<u>Code</u>	<u>Description</u>
IMPROVE	IMPROVE or IMPROVE Protocol
INDEX SITE	(not currently used by MO)
INDUSTRIAL	Used to indicate sites operated by an industry Primary Quality Assurance Organization (PQAO)
NATTS	National Air Toxics Trends Station
NON-EPA FEDERAL	(not currently used by MO)
NON-REGULATORY	Not used for NAAQS Compliance
PAMS	(not currently used by MO)
PROPOSED NCORE	
QA COLLOCATED	Collocated to Satisfy 40 CFR Part 58, Appendix A
SLAMS	State or Local Air Monitoring Station
SPECIAL PURPOSE	Special Purpose Monitoring Station (SPM or SPMS)
SUPLMNTL SPECIATION	
TRENDS SPECIATION	
TRIBAL MONITORS	(not currently used by MO)
UNOFFICIAL PAMS	(not currently used by MO)

State Monitoring Objective

Each monitor has a distinct objective such as providing real-time data for public awareness or use in determining compliance with regulations. The state monitoring objective provides more information about the purpose of the monitoring in addition to the monitor objective required of 40 CFR 58.10(a)(6).

<u>State Objective Code</u>	<u>Objective</u>
AQI	Public Information
COM	NAAQS Compliance
MET	Meteorological Data
RES	Research
STA	State Standard

Units

The physical terms used to quantify the pollutant concentration, such as parts per million or micrograms per cubic meter.

<u>Unit Code</u>	<u>Unit Description</u>
001	$\mu\text{g}/\text{m}^3$
007	parts per million
008	parts per billion
011	meters per second
012	miles per hour
013	knots
014	degree, compass
015	degree Fahrenheit
016	millbars
017	degree Celsius
018	Langleys
019	percent humidity
021	inches
022	inches Mercury
025	Langleys per minute
059	Millimeter (Mercury)
073	Liters/minute STP-Flow
077	Micrograms
079	Watts/m^2
083	Cubic meter/minute
105	$\mu\text{g}/\text{m}^3$ LC
106	Minutes
107	Percent
118	Liters/minute LC-Flow
119	Cubic meters/minute LC-Flow
121	parts per trillion

Monitoring/Analytical Method

Each monitor relies on a scientific principle to determine the pollutant concentration, which is described by the sampling method. Each method code is specific for a particular pollutant; therefore a three numeral code may be used for different methods for different pollutants. This is required of 40 CFR 58.10(a)(3).

Monitoring Objective

This is the primary monitoring objective(s) for the monitoring parameter required of 40 CFR 58.10(a)(6). The monitoring Objective is specific to the pollutant. Some sites may have more than one monitoring objective, but the primary objective is listed first.

APPENDIX 1: MISSOURI MONITORING NETWORK DESCRIPTION

Missouri Ambient Air Monitoring Network



MIC	Microscale	<i>Several meters up to about 100 meters</i>
MID	Middle	<i>100 meters to 0.5 kilometer</i>
NBR	Neighborhood	<i>0.5 to 4.0 kilometers range</i>
URB	Urban	<i>4 to 50 kilometers</i>
REG	Regional	<i>Tens to hundreds of kilometers</i>
COM	National Ambient Air Quality Standards (NAAQS) Compliance	
MET	Meteorological Data	
N/A	Not Applicable	
NCore	National Multi-Pollutant Monitoring Stations	
NON-A	Non-Ambient Site	
NON-R	Non-Regulatory	
PQAO	Primary Quality Assurance Organization	
RES	Research	
SLAMS	State and Local Monitoring Stations	
SIP	State Implementation Plan	
SPEC	Speciation	
STA	State Standard	
SPM	Special Purpose Monitoring	
SPP	Special Purpose Project	
Keep	Monitor under performance evaluation. Data is not reported to EPA Air Quality System (AQS)	

Ameren Missouri (PQAO - 1440)

Labadie, North

AQS Site Number **29-183-9004**

~150 ft. north of Terry Rd and ~200 ft. Kingfisher Ct, Augusta, MO 63332

Latitude: 38.59557 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.82864 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 816

Pollutant	AQS Code	AQS Monitor Type	AQS			State- Obj	AQS Unit- Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
			AQS POC	Keep	AQS Freq						

Sulfur Dioxide	42401	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	100	Ultra-violet Fluorescence	Source Oriented
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Sulfur Dioxide Max 5-min Avg	42406	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	100	Ultra-violet Fluorescence	Source Oriented
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Labadie, Northwest

AQS Site Number **29-183-9002**

Rt. 94, Augusta, MO 63332 near the intersection with Schluersburg Road

Latitude: 38.5818 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.865528 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 550

Pollutant	AQS Code	AQS Monitor Type	AQS			State- Obj	AQS Unit- Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
			AQS POC	Keep	AQS Freq						

Outdoor Temperature	62101	Industrial	2	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (10m Probe Height)
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Outdoor Temperature	62101	Industrial	3	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (2m Probe Height)
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Outdoor Temperature Diff	62106	Industrial	1	<input type="checkbox"/>	1	N/A	MET	116	Temp Diff deg C	041	Instrumental: Elect or Mach Avg Lev 2-Lev1	Other (10m - 2m Probe Heights)
Sulfur Dioxide	42401	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	100	Ultra-violet Fluorescence	Source Oriented
Sulfur Dioxide Max 5-min Avg	42406	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	100	Ultra-violet Fluorescence	Source Oriented
WD - Sigma Theta (Vertical)	61107	Industrial	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (10m Tower)
Wind Direction - Resultant	61104	Industrial	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Vector Summation	Other (10m Tower)
Wind Direction - Scalar	61102	Industrial	1	<input type="checkbox"/>	1	N/A	MET	014	deg	063	Climatronics	Other (10m Tower)
Wind Speed - Resultant	61103	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Vector Summation	Other (10m Tower)
Wind Speed - Scalar	61101	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	063	Climatronics	Other (10m Tower)
Wind Speed - Vertical	61109	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Electronic Averaging	Other (10m Tower)

WS - Sigma Theta (Vertical)	61110	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Arithmetic Standard Deviation	Other (10m Tower)
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Labadie, Southwest

AQS Site Number **29-071-9002**

870 Albertina Lane, Labadie, MO 63055

Latitude: 38.52825 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.86301 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 630

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Sulfur Dioxide	42401	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	100	Ultra-violet Fluorescence	Source Oriented
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Sulfur Dioxide Max 5-min Avg	42406	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	100	Ultra-violet Fluorescence	Source Oriented
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Labadie, Valley Site

AQS Site Number **29-071-9001**

2901 Labadie Bottom Road, Labadie, MO 63055

Latitude: 38.572522 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.796911 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 525

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Barometric Pressure	64101	Industrial	1	<input type="checkbox"/>	1	N/A	MET	016	Millbars	015	Instrumental-Barometric Press Transducer	Other
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Outdoor Temperature	62101	Industrial	2	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (10m Probe Height)
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Outdoor Temperature	62101	Industrial	3	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (2m Probe Height)
Outdoor Temperature Diff	62106	Industrial	1	<input type="checkbox"/>	1	N/A	MET	116	Temp Diff deg C	041	Instrumental: Elect or Mach Avg Lev 2-Lev1	Other (10m - 2m Probe Heights)
Precipitation	65102	Industrial	1	<input type="checkbox"/>	1	N/A	MET	021	inches	014	Heated Tipping Bucket	Other
Relative Humidity	62201	Industrial	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	061	Met One 083D	Other
Solar Radiation	63301	Industrial	1	<input type="checkbox"/>	1	N/A	MET	079	W/m^2	011	Instrumental-Pyranometer	Other
Sulfur Dioxide	42401	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	100	Ultra-violet Fluorescence	Source Oriented
Sulfur Dioxide Max 5-min Avg	42406	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	100	Ultra-violet Fluorescence	Source Oriented
WD - Sigma Theta (Vertical)	61107	Industrial	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (10m Tower)
Wind Direction - Resultant	61104	Industrial	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Vector Summation	Other (10m Tower)

Wind Direction - Scalar	61102	Industrial	1	<input type="checkbox"/>	1	N/A	MET	014	deg	063	Climatronics	Other (10m Tower)
Wind Speed - Resultant	61103	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Vector Summation	Other (10m Tower)
Wind Speed - Scalar	61101	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	063	Climatronics	Other (10m Tower)
Wind Speed - Vertical	61109	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Electronic Averaging	Other (10m Tower)
WS - Sigma Theta (Vertical)	61110	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Arithmetic Standard Deviation	Other (10m Tower)

Rush Island, Fults-Site, IL

AQS Site Number **17-133-9001**

Off Ivy Road, Fults, IL 62244

Latitude: 38.15908 **AQCR:** 138 SE Missouri

Longitude: -90.22728 **MSA:** 0000 Not in a MSA

Elevation (ft): 446

Pollutant	AQS			AQS			AQS			AQS		
	AQS Code	Monitor Type	POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	Unit-Code	AQS Unit	Method Code	AQS Method	Monitor Objective

Barometric Pressure	64101	Industrial	1	<input type="checkbox"/>	1	N/A	MET	016	Millbars	015	Instrumental-Barometric Press Transducer	Other
Outdoor Temperature	62101	Industrial	2	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (10m Probe Height)

Outdoor Temperature	62101	Industrial	3	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (2m Probe Height)
Outdoor Temperature Diff	62106	Industrial	1	<input type="checkbox"/>	1	N/A	MET	116	Temp Diff deg C	041	Instrumental: Elect or Mach Avg Lev 2-Lev1	Other (10m - 2m Probe Heights)
Precipitation	65102	Industrial	1	<input type="checkbox"/>	1	N/A	MET	021	inches	014	Heated Tipping Bucket	Other
Relative Humidity	62201	Industrial	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	061	Met One 083D	Other
Solar Radiation	63301	Industrial	1	<input type="checkbox"/>	1	N/A	MET	079	W/m^2	011	Instrumental-Pyranometer	Other
Sulfur Dioxide	42401	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	100	Ultra-violet Fluorescence	Source Oriented
Sulfur Dioxide Max 5-min Avg	42406	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	100	Ultra-violet Fluorescence	Source Oriented
WD - Sigma Theta (Horizontal)	61106	Industrial	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (10m Tower)
WD - Sigma Theta (Vertical)	61107	Industrial	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (10m Tower)

Wind Direction - Resultant	61104	Industrial	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Vector Summation	Other (10m Tower)
Wind Direction - Scalar	61102	Industrial	1	<input type="checkbox"/>	1	N/A	MET	014	deg	063	Climatronics	Other (10m Tower)
Wind Speed - Resultant	61103	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Vector Summation	Other (10m Tower)
Wind Speed - Scalar	61101	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	063	Climatronics	Other (10m Tower)
Wind Speed - Vertical	61109	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Electronic Averaging	Other (10m Tower)
WS - Sigma Theta (Vertical)	61110	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Arithmetic Standard Deviation	Other (10m Tower)

Rush Island, Johnson Tall Tower

AQS Site Number **29-099-9008**

600 Johnson Rd., Festus, MO 63028

Latitude: 38.11999 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.28214 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 656

Pollutant	AQS Code	AQS Monitor		AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit		AQS Method	AQS Code	AQS Method	AQS Objective
		Type	Code						Unit	Code				

Outdoor Temperature	62101	Industrial	2	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (62.5m Probe Height)
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Outdoor Temperature	62101	Industrial	3	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (132.5m Probe Height)
Outdoor Temperature Diff	62106	Industrial	1	<input type="checkbox"/>	1	N/A	MET	116	Temp Diff deg C	041	Instrumental: Elect or Mach Avg Lev 2-Lev1	Other (132.5m-62.5m Probe Heights)
WD - Sigma Theta (Horizontal)	61106	Industrial	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (132.5m Probe Height)
WD - Sigma Theta (Horizontal)	61106	Industrial	2	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (62.5m Probe Height)
WD - Sigma Theta (Horizontal)	61106	Industrial	3	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (62.5m Probe Height)
WD - Sigma Theta (Horizontal)	61106	Industrial	4	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (62.5m Probe Height)
WD - Sigma Theta (Horizontal)	61106	Industrial	5	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (62.5m Probe Height)
WD - Sigma Theta (Horizontal)	61106	Industrial	6	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (62.5m Probe Height)
WD - Sigma Theta (Vertical)	61107	Industrial	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (132.5m Probe Height)
WD - Sigma Theta (Vertical)	61107	Industrial	2	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (62.5m Probe Height)

WD - Sigma Theta (Vertical)	61107	Industrial	3	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (132.5m Probe Height)
WD - Sigma Theta (Vertical)	61107	Industrial	4	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (132.5m Probe Height)
WD - Sigma Theta (Vertical)	61107	Industrial	5	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (132.5m Probe Height)
WD - Sigma Theta (Vertical)	61107	Industrial	6	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (132.5m Probe Height)
Wind Direction - Resultant	61104	Industrial	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Vector Summation	Other (132.5m Probe Height)
Wind Direction - Resultant	61104	Industrial	2	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Vector Summation	Other (62.5m Probe Height)
Wind Direction - Resultant	61104	Industrial	3	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Vector Summation	Other (62.5m Probe Height)
Wind Direction - Scalar	61102	Industrial	1	<input type="checkbox"/>	1	N/A	MET	014	deg	063	Climatronics	Other (132.5m Probe Height)
Wind Direction - Scalar	61102	Industrial	2	<input type="checkbox"/>	1	N/A	MET	014	deg	063	Climatronics	Other (62.5m Probe Height)
Wind Direction - Scalar	61102	Industrial	3	<input type="checkbox"/>	1	N/A	MET	014	deg	063	Climatronics	Other (62.5m Probe Height)

Wind Speed - Resultant	61103	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Vector Summation	Other (132.5m Probe Height)
Wind Speed - Resultant	61103	Industrial	2	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Vector Summation	Other (62.5m Probe Height)
Wind Speed - Resultant	61103	Industrial	3	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Vector Summation	Other (62.5m Probe Height)
Wind Speed - Scalar	61101	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	063	Climatronics	Other (132.5m Probe Height)
Wind Speed - Scalar	61101	Industrial	2	<input type="checkbox"/>	1	N/A	MET	011	m/s	063	Climatronics	Other (62.5m Probe Height)
Wind Speed - Scalar	61101	Industrial	3	<input type="checkbox"/>	1	N/A	MET	011	m/s	063	Climatronics	Other (62.5m Probe Height)
Wind Speed - Vertical	61109	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Electronic Averaging	Other (132.5m Probe Height)
Wind Speed - Vertical	61109	Industrial	2	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Electronic Averaging	Other (62.5m Probe Height)
Wind Speed - Vertical	61109	Industrial	3	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Electronic Averaging	Other (62.5m Probe Height)
WS - Sigma Theta (Vertical)	61110	Industrial	1	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Arithmetic Standard Deviation	Other (132.5m Probe Height)

WS - Sigma Theta (Vertical)	61110	Industrial	2	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Arithmetic Standard Deviation	Other (62.5m Probe Height)
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WS - Sigma Theta (Vertical)	61110	Industrial	3	<input type="checkbox"/>	1	N/A	MET	011	m/s	020	Arithmetic Standard Deviation	Other (62.5m Probe Height)
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Rush Island, Natchez

AQS Site Number **29-099-9009**

917 Natchez Trace Drive, Bloomsdale, MO 63627

Latitude: 38.10525 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.29842 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 505

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Sulfur Dioxide	42401	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	100	Ultra-violet Fluorescence	Source Oriented
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Sulfur Dioxide Max 5-min Avg	42406	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	100	Ultra-violet Fluorescence	Source Oriented
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Rush Island, Weaver Road & Highway AA

AQS Site Number **29-099-9007**

802 Weaver Road, Festus, MO 63028

Latitude: 38.144972 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.304783 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 502

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Sulfur Dioxide	42401	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	100	Ultra-violet Fluorescence	Source Oriented
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Sulfur Dioxide Max 5-min 42406 Industrial 1 1 MID COM 008 ppb 100 Ultra-violet Fluorescence Source Oriented
Avg

Doe Run Buick (PQAO - 1288)

County Road 75

AQS Site Number 29-093-9010

98 Iron County Road, Bixby, MO 65439

Latitude: 37.64876 **AQCR:** 138 SE Missouri

Longitude: -91.14980 **MSA:** 0000 Not in a MSA

Elevation (ft): 1365

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Sulfur Dioxide	42401	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented
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Sulfur Dioxide Max 5-min Avg	42406	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented
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Doe Run Buick - Buick NE (Pb sampling to change to 1in1) AQS Site Number 29-093-9008

346 Power Lane, Bixby West, MO 65439

Latitude: 37.65214 **AQCR:** 138 SE Missouri

Longitude: -91.11689 **MSA:** 0000 Not in a MSA

Elevation (ft): 1423

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Lead (TSP) - LC FRM/FEM	14129	Industrial	1	<input type="checkbox"/>	1/6	MID	COM	105	ug/m^3-LC	192	Inductive Coupled Plasma Spectrometry	Source Oriented
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Doe Run Buick - North #5 (NON-A)

AQS Site Number **29-093-0021**

Doe Run Buick - North#5, Buick, MO 65439

Latitude: 37.65178 **AQCR:** 138 SE Missouri

Longitude: -91.13094 **MSA:** 0000 Not in a MSA

Elevation (ft): 1443

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Lead (TSP) - LC FRM/FEM 14129	Industrial	1	<input type="checkbox"/>	1/6	MID	SIP	105	ug/m^3-LC	192	Inductive Coupled Plasma Spectrometry	Source Oriented
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Doe Run Buick - South #1 (NON-A)

AQS Site Number **29-093-0016**

Doe Run Buick - South#1, Buick, MO 65439

Latitude: 37.62400 **AQCR:** 138 SE Missouri

Longitude: -91.12827 **MSA:** 0000 Not in a MSA

Elevation (ft): 1502

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Lead (TSP) - LC FRM/FEM 14129	Industrial	1	<input type="checkbox"/>	1/6	MID	SIP	105	ug/m^3-LC	192	Inductive Coupled Plasma Spectrometry	Source Oriented
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Lead (TSP) - LC FRM/FEM 14129	Industrial	2	<input checked="" type="checkbox"/>	1/6	MID	SIP	105	ug/m^3-LC	192	Inductive Coupled Plasma Spectrometry	Quality Assurance (Collocation)
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Hwy 32 Northeast

AQS Site Number **29-093-9009**

1582 Highway 32, Bixby, MO 65439

Latitude: 37.65319 **AQCR:** 138 SE Missouri

Longitude: -91.12795 **MSA:** 0000 Not in a MSA

Elevation (ft): 1384

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Sulfur Dioxide	42401	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented
Sulfur Dioxide Max 5-min Avg	42406	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented

West Entrance

AQS Site Number **29-093-9011**

18594 Hwy KK, Boss, MO 65440

Latitude: 37.63211 **AQCR:** 138 SE Missouri

Longitude: -91.13565 **MSA:** 0000 Not in a MSA

Elevation (ft): 1463

Pollutant	AQS Monitor		AQS POC		AQS Keep		AQS Freq		AQS Scale Obj		AQS Unit-Code		AQS Method Code		AQS Method		AQS Monitor Objective	
	AQS Code	Monitor Type	AQS POC	Keep	AQS Freq	Scale	Obj	AQS Unit	AQS Obj	AQS Code	AQS Unit	AQS Method	AQS Code	AQS Method	AQS Objective	AQS Method	AQS Objective	

Sulfur Dioxide	42401	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented
Sulfur Dioxide Max 5-min Avg	42406	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented

Doe Run Glover (PQAO - 1289)

Doe Run Glover - Big Creek #5 (NON-A)

AQS Site Number **29-093-0029**

Doe Run Glover - Big Creek #5, Hwy 49 Glover, MO 65439

Latitude: 37.47211 **AQCR:** 138 SE Missouri

Longitude: -90.68919 **MSA:** 0000 Not in a MSA

Elevation (ft): 836

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Lead (TSP) - LC FRM/FEM 14129	Industrial	1	<input type="checkbox"/>	1/6	MID	SIP	105	ug/m^3-LC	189	Inter-Mountain Lab, Inc Mass Spectra ICAP	Source Oriented
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Doe Run Glover - Post Office #2 (NON-A)

AQS Site Number **29-093-0027**

Doe Run Glover - Post Office #2, Hwy 49 Glover, MO 65439

Latitude: 37.48532 **AQCR:** 138 SE Missouri

Longitude: -90.68991 **MSA:** 0000 Not in a MSA

Elevation (ft): 831

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Lead (TSP) - LC FRM/FEM 14129	Industrial	1	<input type="checkbox"/>	1/6	MID	SIP	105	ug/m^3-LC	189	Inter-Mountain Lab, Inc Mass Spectra ICAP	Source Oriented
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Lead (TSP) - LC FRM/FEM 14129	Industrial	2	<input type="checkbox"/>	1/6	MID	SIP	105	ug/m^3-LC	189	Inter-Mountain Lab, Inc Mass Spectra ICAP	Quality Assurance (Collocation)
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Doe Run Herculaneum (PQAO - 1290)

Herculaneum, Church Street (NON-A)

AQS Site Number **29-099-0024**

951 Church St., Herculaneum, MO 63048

Latitude: 38.258667 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.380889 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 463

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Objective
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Lead (TSP) - LC FRM/FEM 14129	Industrial	1	<input type="checkbox"/>	1/6	NBR	COM	105	ug/m^3-LC	192	Inductive Coupled Plasma Spectrometry	Source Oriented
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Lead (TSP) - LC FRM/FEM 14129	Industrial	2	<input type="checkbox"/>	1/6	NBR	COM	105	ug/m^3-LC	192	Inductive Coupled Plasma Spectrometry	Quality Assurance (Collocation)
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Herculaneum, City Hall (Mott Street)

AQS Site Number **29-099-0020**

360 Short Street, Herculaneum, MO, 63048

Latitude: 38.263394 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.379667 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 468

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Objective
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Lead (TSP) - LC FRM/FEM 14129	Industrial	1	<input type="checkbox"/>	1/1	MID	COM	105	ug/m^3-LC	192	Inductive Coupled Plasma Spectrometry	Source Oriented & Highest Concentration
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Lead (TSP) - LC FRM/FEM 14129	Industrial	2	<input type="checkbox"/>	1/3	MID	COM	105	ug/m^3-LC	192	Inductive Coupled Plasma Spectrometry	Quality Assurance (Collocation)
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Herculaneum, Dunklin High School

AQS Site Number 29-099-9002

1 Black Cat Dr., Herculaneum, MO, 63048

Latitude: 38.26703 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.37875 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 445

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Lead (TSP) - LC FRM/FEM 14129 Industrial 1 1/3 NBR COM 105 ug/m^3-LC 192 Inductive Coupled Plasma Spectrometry Source Oriented & Population Exposure

Herculaneum, North Cross

AQS Site Number 29-099-0023

North Cross, Herculaneum, MO 63048

Latitude: 38.263378 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.381122 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 463

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Lead (TSP) - LC FRM/FEM 14129 Industrial 1 1/1 NBR COM 105 ug/m^3-LC 192 Inductive Coupled Plasma Spectrometry Source Oriented & Population Exposure

Herculaneum, Sherman

AQS Site Number 29-099-9004

460 Sherman St., Herculaneum, MO, 63048

Latitude: 38.27176 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.37648 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 462

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Lead (TSP) - LC FRM/FEM 14129 Industrial 1 1/6 NBR COM 105 ug/m³-LC 192 Inductive Coupled Plasma Spectrometry Source Oriented

Environmental Services Program (ESP) [PQAO - 0588]

Alba

AQS Site Number 29-097-0004

20400 Millwood Rd., Alba, MO 64755

Latitude: 37.2385 *AQCR:* 139 SW Missouri

Longitude: -94.42468 *MSA:* 3710 Joplin, MO

Elevation (ft): 965

<i>Pollutant</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>
	<i>Code</i>	<i>Monitor Type</i>	<i>POC</i>	<i>Keep</i>	<i>Freq</i>	<i>Scale</i>	<i>Obj</i>	<i>Unit-Code</i>	<i>Unit</i>	<i>Method Code</i>

Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
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Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	Max Ozone Concentration & Population Exposure
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Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	-
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Arnold West: PM10-FEM not submitting AOS data

AQS Site Number 29-099-0019

1709 Lonedell Dr., Arnold, MO 63010

Latitude: 38.44862 *AQCR:* 070 Metropolitan St. Louis

Longitude: -90.3958 *MSA:* 7040 St. Louis, MO-IL

Elevation (ft): 639

<i>Pollutant</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>
	<i>Code</i>	<i>Monitor Type</i>	<i>POC</i>	<i>Keep</i>	<i>Freq</i>	<i>Scale</i>	<i>Obj</i>	<i>Unit-Code</i>	<i>Unit</i>	<i>Method Code</i>

Ammonium Ion PM2.5 LC	88301	SLAMS	6	<input type="checkbox"/>	1/6	NBR	RES	105	ug/m^3-LC	812	Met One SASS Nylon	Population Exposure (UC-Davis)
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Barometric Pressure	64101	SPM	1	<input type="checkbox"/>	1	N/A	MET	059	mm (Hg)	014	Instrumental-Barometric Sensor	Other
Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
OP CSN_Rev Undj PM2.5 LC TOR	88378	SLAMS	6	<input type="checkbox"/>	1/6	NBR	RES	105	ug/m^3-LC	842	URG 3000N w/Pall Quartz filter & Cyclone Inlet	Population Exposure (UC-Davis)
Outdoor Temperature	62101	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (4m Probe Height)
Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	Population Exposure
Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	-
PM10 - LC/FEM/NonFEM	85101	SPM	5	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	790	FDMS-Gravimetric 1405- DF	Population Exposure
PM10 - LC/FEM/NonFEM	85101	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	208	FMDS-Gravimetric 1405- DF	Population Exposure
PM10 - STP FRM/FEM	81102	SLAMS	3	<input type="checkbox"/>	1	NBR	COM	001	ug/m^3	079	R&P SA246B TEOM	Population Exposure
PM10 - STP FRM/FEM	81102	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	001	ug/m^3	208	FMDS-Gravimetric 1405- DF	Population Exposure

PM2.5 - LC FRM/FEM	88101	SLAMS	4	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	182	FMDS-Gravimetric	Population DF
PM2.5 Tot Atmospheric	88500	SPM	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FMDS-Gravimetric	Population DF
PM2.5 Volatile Channel	88503	SPM	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FMDS-Gravimetric	Population DF
PMCoarse - LC FRM/FEM	86101	SLAMS	8	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	207	FMDS-Gravimetric	Population DF
Relative Humidity	62201	SPM	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental-Computed (Indirect)	Other
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	067	Instrumental: RM Young Model 05103	Other (10m Tower)
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	067	Instrumental: RM Young Model 05103	Other (10m Tower)

Blair Street: PM10-FEM not submitting AOS data

AQS Site Number **29-510-0085**

3247 Blair Street, St. Louis, MO 63107

Latitude: 38.65638 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.19825 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 492

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Ammonium Ion PM2.5 LC	88301	SLAMS	6	<input type="checkbox"/>	1/3	NBR	RES	105	ug/m^3-LC	812	Met One SASS Nylon	Highest Concentration (UC-Davis)
Barometric Pressure	64101	SLAMS	1	<input type="checkbox"/>	1	N/A	MET	059	mm (Hg)	014	Instrumental-Barometric Sensor	Other
Black Carbon PM2.5 LC	88313	SLAMS	1	<input type="checkbox"/>	1	NBR	RES	105	ug/m^3-LC	894	Magee Scientific TAPI M633 Aethalometer	Population Exposure
Carbon Monoxide	42101	NCORE	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	055	Gas Filter Corr Thermo Electron 48C-TL	Population Exposure
Indoor Temperature	62107	SLAMS	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other (Large Shelter)
Indoor Temperature	62107	SLAMS	2	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other (Small Shelter)
Lead PM10 LC - FRM/FEM	85129	SLAMS	6	<input type="checkbox"/>	1/6	NBR	RES	108	ng/m^3-LC	907	R&P Partisol 2025 Teflon	Population Exposure (ERG)
Lead PM10 LC - FRM/FEM	85129	SLAMS	7	<input type="checkbox"/>	1/6	NBR	RES	108	ng/m^3-LC	907	R&P Partisol 2025 Teflon	Population Exposure (ERG)
Nitric Oxide	42601	NCORE	1	<input type="checkbox"/>	1	NBR	COM	008	ppb	699	Teledyne API 200 EU/501	Population Exposure
Nitric Oxide	42601	SPM	2	<input type="checkbox"/>	1	NBR	COM	008	ppb	200	Teledyne API T200UP Photolytic	Population Exposure

Nitrogen Dioxide	42602	SPM	2	<input type="checkbox"/>	1	NBR	COM	008	ppb	200	Teledyne API T200UP Photolytic	Population Exposure
OC CSN Unadj PM2.5 LC TOT	88305	SLAMS	1	<input type="checkbox"/>	1	NBR	RES	105	ug/m^3-LC	867	Sunset Labs	Population Exposure
OP CSN_Rev Undj PM2.5 LC TOR	88378	SLAMS	6	<input type="checkbox"/>	1/3	NBR	RES	105	ug/m^3-LC	842	URG 3000N w/Pall Quartz filter & Cyclone Inlet	Highest Concentration (UC-Davis)
Optical EC PM2.5 LC TOT	88316	SLAMS	1	<input type="checkbox"/>	1	NBR	RES	105	ug/m^3-LC	895	Sunset Lab	Population Exposure
Outdoor Temperature	62101	NCORE	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (4m Probe Height)
Oxides of Nitrogen	42603	SPM	2	<input type="checkbox"/>	1	NBR	COM	008	ppb	200	Teledyne API T200UP Photolytic	Population Exposure
Ozone	44201	NCORE	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	Population Exposure
Ozone	44201	NCORE	2	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	-
PM10 - LC/FEM/NonFEM	85101	SLAMS	1	<input type="checkbox"/>	1/3	NBR	COM	105	ug/m^3-LC	127	Lo-Vol R&P 2025 Sequential	Population Exposure

PM10 - LC/FEM/NonFEM	85101	SLAMS	2	<input type="checkbox"/>	1/6	NBR	COM	105	ug/m^3-LC	127	Lo-Vol R&P	2025	Quality Assurance (Collocation)
PM10 - LC/FEM/NonFEM	85101	SLAMS	5	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	790	FDMS-Gravimetric	1405-	Population Exposure DF
PM10 - LC/FEM/NonFEM	85101	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	208	FMDS-Gravimetric	1405-	Population Exposure DF
PM10 - STP FRM/FEM	81102	SLAMS	1	<input type="checkbox"/>	1/3	NBR	COM	001	ug/m^3	127	Lo-Vol R&P	2025	Population Exposure
PM10 - STP FRM/FEM	81102	SLAMS	2	<input type="checkbox"/>	1/6	NBR	COM	001	ug/m^3	127	Lo-Vol R&P	2025	Quality Assurance (Collocation)
PM10 - STP FRM/FEM	81102	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	001	ug/m^3	208	FMDS-Gravimetric	1405-	Population Exposure DF
PM2.5 - LC FRM/FEM	88101	NCORE	2	<input type="checkbox"/>	1/3	NBR	COM	105	ug/m^3-LC	145	R&P	2025	Quality Assurance (Collocation) w/VSCC
PM2.5 - LC FRM/FEM	88101	SLAMS	4	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	182	FMDS-Gravimetric	1405-	Population Exposure DF
PM2.5 Tot Atmospheric	88500	SLAMS	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric	1405-	Population Exposure DF
PM2.5 Volatile Channel	88503	SLAMS	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric	1405-	Population Exposure DF

PMCoarse - LC FRM/FEM	86101	SLAMS	1	<input type="checkbox"/>	1/3	NBR	COM	105	ug/m^3-LC	176	Thermo 2025 Sequential PM10- Exposure PM2.5	Population
PMCoarse - LC FRM/FEM	86101	SLAMS	8	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	207	FMDS-Gravimetric DF	Population 1405- Exposure
Reactive Oxides of N (NOY)	42600	NCORE	1	<input type="checkbox"/>	1	NBR	COM	008	ppb	699	Teledyne API 200 EU/501	Population Exposure
Relative Humidity	62201	NCORE	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	014	Instrumental-Hygrometer C94 Probe	Other
Solar Radiation	63301	SLAMS	1	<input type="checkbox"/>	1	N/A	MET	079	W/m^2	011	Instrumental-Pyranometer	Other
Sulfur Dioxide	42401	NCORE	1	<input type="checkbox"/>	1	NBR	COM	008	ppb	600	Ultraviolet Fluorescence API 100 EU	Population Exposure
Sulfur Dioxide Max 5-min Avg	42406	NCORE	1	<input type="checkbox"/>	1	NBR	COM	008	ppb	600	Ultraviolet Fluorescence API 100 EU	Population Exposure
Total Carbon PM2.5 LC TOT	88312	SLAMS	1	<input type="checkbox"/>	1	NBR	RES	105	ug/m^3-LC	867	Sunset Labs	Population Exposure
UV Carbon PM2.5 LC	88314	SLAMS	1	<input type="checkbox"/>	1	NBR	RES	105	ug/m^3-LC	894	Magee Scientific TAPI M633 Aethalometer	Population Exposure

WD - Sigma Theta (Horizontal)	61106	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (10m Tower)
Wind Direction - Resultant	61104	NCORE	1	<input type="checkbox"/>	1	N/A	MET	014	deg	065	Instrumental: RM Young Model 05305	Other (10m Tower)
Wind Speed - Resultant	61103	NCORE	1	<input type="checkbox"/>	1	N/A	MET	012	mph	065	Instrumental: RM Young Model 05305	Other (10m Tower)

Blue Ridge, I-70: PM10-FEM not submitting AOS data

AQS Site Number **29-095-0042**

4018 Harvard Lane, Kansas City, MO 64133

Latitude: 39.047911 **AQCR:** 094 Metropolitan Kansas City

Longitude: -94.450513 **MSA:** 3760 Kansas City, MO-KS

Elevation (ft): 960

Pollutant	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>Monitor</i>
	Code	Monitor	Type	POC	Keep	Freq	Scale	State-Obj	Unit-Code	Unit	Method	Code	Method	Objective

Barometric Pressure 64101 SPM 1 1 N/A MET 059 mm (Hg) 014 Instrumental-Barometric Sensor Other

Black Carbon PM2.5 LC 88313 SPM 1 1 MIC COM 105 ug/m^3-LC 894 Magee Scientific TAPI M633 Aethalometer Source Oriented

Carbon Monoxide 42101 SLAMS 1 1 MIC COM 007 ppm 055 Gas Filter Corr Thermo Electron 48C-TL Source Oriented

Indoor Temperature 62107 SPM 1 1 N/A MET 017 deg C 013 Electronic Averaging Other

Nitric Oxide	42601	SPM	1	<input type="checkbox"/>	1	MIC	COM	008	ppb	074	Chemiluminescence	Source Oriented
Nitrogen Dioxide	42602	SLAMS	1	<input type="checkbox"/>	1	MIC	COM	008	ppb	074	Chemiluminescence	Source Oriented
Outdoor Temperature	62101	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (4m Probe Height)
Outdoor Temperature	62101	SPM	2	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (10m Probe Height)
Outdoor Temperature	62101	SPM	3	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (2m Probe Height)
Outdoor Temperature Diff	62106	SPM	1	<input type="checkbox"/>	1	N/A	MET	116	Temp Diff deg C	041	Instrumental: Elect or Mach Avg Lev 2-Lev1	Other
Oxides of Nitrogen	42603	SPM	1	<input type="checkbox"/>	1	MIC	COM	008	ppb	074	Chemiluminescence	Source Oriented
PM10 - LC/FEM/NonFEM	85101	SPM	5	<input type="checkbox"/>	1	MIC	COM	105	ug/m^3-LC	790	FDMS-Gravimetric 1405-	Source Oriented DF
PM10 - LC/FEM/NonFEM	85101	SLAMS	8	<input checked="" type="checkbox"/>	1	MIC	COM	105	ug/m^3-LC	208	FMDS-Gravimetric 1405-	Source Oriented DF
PM10 - STP FRM/FEM	81102	SLAMS	8	<input checked="" type="checkbox"/>	1	MIC	COM	001	ug/m^3	208	FMDS-Gravimetric 1405-	Source Oriented DF

PM2.5 - LC FRM/FEM	88101	SLAMS	4	<input type="checkbox"/>	1	MIC	COM	105	ug/m^3-LC	182	FMDS-Gravimetric	Source
PM2.5 Tot Atmospheric	88500	SPM	1	<input type="checkbox"/>	1	MIC	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric	Source
PM2.5 Volatile Channel	88503	SPM	1	<input type="checkbox"/>	1	MIC	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric	Source
PMCoarse - LC FRM/FEM	86101	SLAMS	8	<input type="checkbox"/>	1	MIC	COM	105	ug/m^3-LC	207	FMDS-Gravimetric	Source
Precipitation	65102	SPM	1	<input type="checkbox"/>	1	N/A	MET	021	inches	014	Heated Tipping Bucket	Other
Relative Humidity	62201	SPM	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental-Computed (Indirect)	Other
Solar Radiation	63301	SPM	1	<input type="checkbox"/>	1	N/A	MET	079	W/m^2	011	Instrumental-Pyranometer	Other
UV Carbon PM2.5 LC	88314	SPM	1	<input type="checkbox"/>	1	MIC	COM	105	ug/m^3-LC	894	Magee Scientific TAPI M633 Aethalometer	Source Oriented
WD - Sigma Theta (Horizontal)	61106	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (10m Tower)

Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	065	Instrumental: RM Young Model 05305	Other (10m Tower)
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Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	065	Instrumental: RM Young Model 05305	Other (10m Tower)
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Bonne Terre

AQS Site Number 29-186-0005

15797 Highway D, Bonne Terre, MO 63628

Latitude: 37.90084 **AQCR:** 138 SE Missouri

Longitude: -90.42388 **MSA:** 0000 Not in a MSA

Elevation (ft): 840

Pollutant	AQS Monitor			AQS POC			AQS			AQS Unit-		AQS Method		AQS	
	AQS Code	Monitor Type	Keep	AQS Freq	AQS Scale	State-Obj	Code	Unit	Code	Method	Code	Method	Monitor Objective		

Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
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Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	REG	COM	007	ppm	047	Ultraviolet Photometric	Regional Transport
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Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	REG	COM	007	ppm	047	Ultraviolet Photometric	-
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Solar Radiation	63301	SPM	1	<input type="checkbox"/>	1	N/A	MET	079	W/m^2	011	Instrumental-Pyranometer	Other
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Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	067	Instrumental: RM Young Model 05103	Other (5.5 meters)
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Wind Speed - Resultant 61103 SPM 1 1 N/A MET 012 mph 067 Instrumental: RM Young Model 05103 Other (5.5 meters)

Branch Street: PM10-FEM not submitting AOS data

AQS Site Number 29-510-0093

100 Branch St., St. Louis, MO 63102

Latitude: 38.65643 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.18977 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 429

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Barometric Pressure 64101 SPM 1 1 N/A MET 059 mm (Hg) 014 Instrumental-Barometric Sensor Other

Indoor Temperature 62107 SPM 1 1 N/A MET 017 deg C 013 Electronic Averaging Other

Outdoor Temperature 62101 SPM 1 1 N/A MET 017 deg C 040 Electronic Averaging Other (4m Probe Height)

PM10 - LC/FEM/NonFEM 85101 SPM 5 1 MID COM 105 ug/m^3-LC 790 FDMS-Gravimetric 1405- Oriented DF Source

PM10 - LC/FEM/NonFEM 85101 SLAMS 8 1 MID COM 105 ug/m^3-LC 208 FMDS-Gravimetric 1405- Oriented DF Source

PM10 - STP FRM/FEM 81102 SLAMS 3 1 MID COM 001 ug/m^3 079 R&P SA246B TEOM Source Oriented

PM10 - STP FRM/FEM	81102	SLAMS	8	<input checked="" type="checkbox"/>	1	MID	COM	001	ug/m^3	208	FMDS-Gravimetric 1405- Oriented DF	Source
PM2.5 - LC FRM/FEM	88101	SLAMS	4	<input type="checkbox"/>	1	MID	COM	105	ug/m^3-LC	182	FMDS-Gravimetric 1405- Oriented DF	Source
PM2.5 Tot Atmospheric	88500	SPM	1	<input type="checkbox"/>	1	MID	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric 1405- Oriented DF	Source
PM2.5 Volatile Channel	88503	SPM	1	<input type="checkbox"/>	1	MID	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric 1405- Oriented DF	Source
PMCoarse - LC FRM/FEM	86101	SLAMS	8	<input type="checkbox"/>	1	MID	COM	105	ug/m^3-LC	207	FMDS-Gravimetric 1405- Oriented DF	Source
Relative Humidity	62201	SPM	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental-Computed (Indirect)	Other
WD - Sigma Theta (Horizontal)	61106	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (10m Tower)
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	065	Instrumental: RM Young Model 05305	Other (10m Tower)
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	065	Instrumental: RM Young Model 05305	Other (10m Tower)

Branson (Proposed for discontinuation)

AQS Site Number 29-213-0004

251 SW. Outer Rd., Branson, MO 65616

Latitude: 36.70765 **AQCR:** 139 SW Missouri**Longitude:** -93.22181 **MSA:** 0000 Not in a MSA**Elevation (ft):** 1052

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
Ozone	44201	SPM	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	Max Ozone Concentration & Population Exposure
Ozone	44201	SPM	2	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	-
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	067	Instrumental: RM Young Model 05103	Other (5.5 meters)
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	067	Instrumental: RM Young Model 05103	Other (5.5 meters)

Buick NE

AQS Site Number 29-093-0034

346 Power Lane, Bixby West, MO 65439

Latitude: 37.65212 **AQCR:** 138 SE Missouri**Longitude:** -91.11653 **MSA:** 0000 Not in a MSA**Elevation (ft):** 1423

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
Lead (TSP) - LC FRM/FEM 14129	SLAMS	1	<input type="checkbox"/>	1/6	MID	COM	105	ug/m^3-LC	813	Inductively Coupled Plasma Mass Spectroscopy	Source Oriented & Highest Concentration	
Lead (TSP) - LC FRM/FEM 14129	SLAMS	2	<input type="checkbox"/>	1/6	MID	COM	105	ug/m^3-LC	813	Inductively Coupled Plasma Mass Spectroscopy	Quality Assurance (Collocation)	
Sulfur Dioxide	42401	SPM	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented
Sulfur Dioxide Max 5-min Avg	42406	SPM	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	067	Instrumental: RM Young Model 05103	Other (6 meters)
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	067	Instrumental: RM Young Model 05103	Other (6 meters)

Carthage

AQS Site Number **29-097-0003**

530 Juniper, Carthage, MO 64836

Latitude: 37.19822 **AQCR:** 139 SW Missouri

Longitude: -94.31702 **MSA:** 3710 Joplin, MO

Elevation (ft): 986

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
PM10 - STP FRM/FEM	81102	SLAMS	3	<input type="checkbox"/>	1	MID	COM	001	ug/m^3	079	R&P SA246B TEOM	Source Oriented
PM10 - STP FRM/FEM	81102	SLAMS	4	<input type="checkbox"/>	1	MID	COM	001	ug/m^3	079	R&P SA246B TEOM	Quality Assurance (Collocation)
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	065	Instrumental: RM Young Model 05305	Other (5.5 meters)
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	065	Instrumental: RM Young Model 05305	Other (5.5 meters)

El Dorado Springs: PM10-FEM not submitting AOS data AQS Site Number 29-039-0001

Highway 97 & Barnes Road, El Dorado Springs, MO 64744

Latitude: 37.70097 **AQCR:** 139 SW Missouri

Longitude: -94.03474 **MSA:** 0000 Not in a MSA

Elevation (ft): 965

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Barometric Pressure	64101	SPM	1	<input type="checkbox"/>	1	N/A	MET	059	mm (Hg)	014	Instrumental-Barometric Sensor	Other
Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other

Outdoor Temperature	62101	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (4m Probe Height)
Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	REG	COM	007	ppm	047	Ultraviolet Photometric	Regional Transport
Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	REG	COM	007	ppm	047	Ultraviolet Photometric	-
PM10 - LC/FEM/NonFEM	85101	SPM	5	<input type="checkbox"/>	1	REG	COM	105	ug/m^3-LC	790	FDMS-Gravimetric DF	Regional 1405- Transport
PM10 - LC/FEM/NonFEM	85101	SLAMS	8	<input checked="" type="checkbox"/>	1	REG	COM	105	ug/m^3-LC	208	FMDS-Gravimetric DF	Regional 1405- Transport
PM10 - STP FRM/FEM	81102	SLAMS	8	<input checked="" type="checkbox"/>	1	REG	COM	001	ug/m^3	208	FMDS-Gravimetric DF	Regional 1405- Transport
PM2.5 - LC FRM/FEM	88101	SLAMS	4	<input type="checkbox"/>	1	REG	COM	105	ug/m^3-LC	182	FMDS-Gravimetric DF	Regional 1405- Transport
PM2.5 Tot Atmospheric	88500	SPM	1	<input type="checkbox"/>	1	REG	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric DF	Regional 1405- Transport
PM2.5 Volatile Channel	88503	SPM	1	<input type="checkbox"/>	1	REG	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric DF	Regional 1405- Transport
PMCoarse - LC FRM/FEM	86101	SLAMS	8	<input type="checkbox"/>	1	REG	COM	105	ug/m^3-LC	207	FMDS-Gravimetric DF	Regional 1405- Transport

Relative Humidity	62201	SPM	2	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental-Computed (Indirect)	Other
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	067	Instrumental: RM Young Model 05103	Other (5.5 meters)
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	067	Instrumental: RM Young Model 05103	Other (5.5 meters)

Farrar

AQS Site Number **29-157-0001**

County Rd. 342, Farrar, MO 63746

Latitude: 37.70264 **AQCR:** 138 SE Missouri

Longitude: -89.698640 **MSA:** 0000 Not in a MSA

Elevation (ft): 497

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
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Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	Max Ozone Concentration & Extreme Downwind
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Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	-
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Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	067	Instrumental: RM Young Model 05103	Other (5.5 meters)
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Wind Speed - Resultant 61103 SPM 1 1 N/A MET 012 mph 067 Instrumental: RM Young Model 05103 Other (5.5 meters)

Fellows Lake

AQS Site Number **29-077-0042**

4208 E. Farm Rd. 66, Springfield, MO 65803

Latitude: 37.319444 **AQCR:** 139 SW Missouri

Longitude: -93.204444 **MSA:** 7920 Springfield, MO

Elevation (ft): 1346

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature 62107 SPM 1 1 N/A MET 017 deg C 013 Electronic Averaging Other

Ozone 44201 SLAMS 1 1 URB COM 007 ppm 047 Ultraviolet Photometric Max Ozone Concentration & Population Exposure

Ozone 44201 SLAMS 2 1 URB COM 007 ppm 047 Ultraviolet Photometric -

Finger Lakes

AQS Site Number **29-019-0011**

1505 E. Peabody Road, Columbia, MO 65202

Latitude: 39.07803 **AQCR:** 137 Northern Missouri

Longitude: -92.31632 **MSA:** 1740 Columbia, MO

Elevation (ft): 726

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature 62107 SPM 1 1 N/A MET 017 deg C 013 Electronic Averaging Other

Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	Max Ozone Concentration & Population Exposure
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Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	-
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Fletcher

AQS Site Number **29-179-0002**

Forest Rd. 2236, Westfork, MO 64498

Latitude: 37.46889 **AQCR:** 138 SE Missouri

Longitude: -91.08847 **MSA:** 0000 Not in a MSA

Elevation (ft): 1256

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Lead (TSP) - LC FRM/FEM 14129	SLAMS	1	<input type="checkbox"/>	1/6	NBR	COM	105	ug/m^3-LC	813	Inductively Coupled Plasma Mass Spectroscopy	Source Oriented
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Foley West

AQS Site Number **29-113-0004**

2100 Highway Y Foley, MO 63347

Latitude: 39.04577 **AQCR:** 137 Northern Missouri

Longitude: -90.84927 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 715

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
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Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	Extreme Downwind
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Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	-
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	067	Instrumental: RM Young Model 05103	Other (5.5 meters)
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	067	Instrumental: RM Young Model 05103	Other (5.5 meters)

Forest City, Exide Levee AQS Site Number 29-087-0008

300 S. Washington St., Oregon MO, 64473

Latitude: 40.027222 **AQCR:** 137 Northern Missouri

Longitude: -95.235833 **MSA:** 0000 Not in a MSA

Elevation (ft): 904

Pollutant	AQS Monitor		AQS POC		AQS Keep		AQS Freq		AQS Scale		State-Obj		AQS Unit-Code		AQS Method		AQS Method		AQS Monitor Objective	
	AQS Code	Monitor Type	AQS	POC	AQS	Keep	AQS	Freq	AQS	Scale	State-	Obj	AQS	Unit	AQS	Method	AQS	Method	AQS	Monitor Objective

Lead (TSP) - LC FRM/FEM 14129	SLAMS	1	<input type="checkbox"/>	1/6	MID	COM	105	ug/m^3-LC	813	Inductively Coupled Plasma Mass Spectroscopy	Source Oriented
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Forest Park: PM10-FEM not submitting AOS data AQS Site Number 29-510-0094

5600 Clayton Avenue, St. Louis, MO 63110

Latitude: 38.63114 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.28115 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 551

Pollutant	AQS Monitor		AQS POC		AQS Keep		AQS Freq		AQS Scale		State-Obj		AQS Unit-Code		AQS Method		AQS Method		AQS Monitor Objective	
	AQS Code	Monitor Type	AQS	POC	AQS	Keep	AQS	Freq	AQS	Scale	State-	Obj	AQS	Unit	AQS	Method	AQS	Method	AQS	Monitor Objective

Barometric Pressure	64101	SPM	1	<input type="checkbox"/>	1	N/A	MET	059	mm (Hg)	014	Instrumental-Barometric Sensor	Other
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Black Carbon PM2.5 LC	88313	SPM	1	<input type="checkbox"/>	1	MIC	COM	105	ug/m^3-LC	894	Magee Scientific TAPI M633 Aethalometer	Source Oriented
Carbon Monoxide	42101	SLAMS	1	<input type="checkbox"/>	1	MIC	COM	007	ppm	055	Gas Filter Corr Thermo Electron 48C-TL	Source Oriented
Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
Nitric Oxide	42601	SPM	1	<input type="checkbox"/>	1	MIC	COM	008	ppb	074	Chemiluminescence	Source Oriented
Nitrogen Dioxide	42602	SLAMS	1	<input type="checkbox"/>	1	MIC	COM	008	ppb	074	Chemiluminescence	Source Oriented
Outdoor Temperature	62101	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (4m Probe Height)
Outdoor Temperature	62101	SPM	2	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (10m Probe Height)
Outdoor Temperature	62101	SPM	3	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (2m Probe Height)
Outdoor Temperature Diff	62106	SPM	1	<input type="checkbox"/>	1	N/A	MET	116	Temp Diff deg C	041	Instrumental: Elect or Mach Avg Lev 2-Lev1	Other (10m - 2m Probe Height)
Oxides of Nitrogen	42603	SPM	1	<input type="checkbox"/>	1	MIC	COM	008	ppb	074	Chemiluminescence	Source Oriented

PM10 - LC/FEM/NonFEM	85101	SPM	5	<input type="checkbox"/>	1	MIC	COM	105	ug/m^3-LC	790	FDMS-Gravimetric	Source 1405- Oriented DF
PM10 - LC/FEM/NonFEM	85101	SLAMS	8	<input checked="" type="checkbox"/>	1	MIC	COM	105	ug/m^3-LC	208	FMDS-Gravimetric	Source 1405- Oriented DF
PM10 - STP FRM/FEM	81102	SLAMS	8	<input checked="" type="checkbox"/>	1	MIC	COM	001	ug/m^3	208	FMDS-Gravimetric	Source 1405- Oriented DF
PM2.5 - LC FRM/FEM	88101	SLAMS	4	<input type="checkbox"/>	1	MIC	COM	105	ug/m^3-LC	182	FMDS-Gravimetric	Source 1405- Oriented DF
PM2.5 Tot Atmospheric	88500	SPM	1	<input type="checkbox"/>	1	MIC	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric	Source 1405- Oriented DF
PM2.5 Volatile Channel	88503	SPM	1	<input type="checkbox"/>	1	MIC	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric	Source 1405- Oriented DF
PMCoarse - LC FRM/FEM	86101	SLAMS	8	<input type="checkbox"/>	1	MIC	COM	105	ug/m^3-LC	207	FMDS-Gravimetric	Source 1405- Oriented DF
Precipitation	65102	SPM	1	<input type="checkbox"/>	1	N/A	MET	021	inches	014	Heated Tipping Bucket	Other
Relative Humidity	62201	SPM	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental-Computed (Indirect)	Other

Solar Radiation	63301	SLAMS	1	<input type="checkbox"/>	1	N/A	MET	079	W/m^2	011	Instrumental-Pyranometer	Other
UV Carbon PM2.5 LC	88314	SPM	1	<input type="checkbox"/>	1	MIC	COM	105	ug/m^3-LC	894	Magee Scientific TAPI M633 Aethalometer	Source Oriented
WD - Sigma Theta (Horizontal)	61106	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (10m Tower)
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	065	Instrumental: RM Young Model 05305	Other (10m Tower)
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	065	Instrumental: RM Young Model 05305	Other (10m Tower)

Front Street

AQS Site Number **29-095-0018**

1331 N. Jackson, Kansas City, MO 64120

Latitude: 39.13198 **AQCR:** 094 Metropolitan Kansas City

Longitude: -94.53128 **MSA:** 3760 Kansas City, MO-KS

Elevation (ft): 728

Pollutant	AQS		AQS		AQS		AQS		AQS		AQS	
	AQS Code	Monitor Type	POC	Keep	Freq	Scale	State-Obj	Unit-Code	AQS Unit	Method Code	AQS Method	Monitor Objective

Indoor Temperature 62107 SPM 1 1 N/A MET 017 deg C 013 Electronic Averaging Other

PM10 - STP FRM/FEM 81102 SLAMS 3 1 NBR COM 001 ug/m^3 079 R&P SA246B TEOM Highest Concentration & Population Exposure

Glover**AQS Site Number 29-093-0033**

Highway 49, approx. 0.4m South Highways 21/49/72 Intersection, Glover, 63620

Latitude: 37.48966 **AQCR:** 138 SE Missouri**Longitude:** -90.69246 **MSA:** 0000 Not in a MSA**Elevation (ft):** 912

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Lead (TSP) - LC FRM/FEM 14129 SLAMS 1 1/6 NBR COM 105 ug/m^3-LC 813 Inductively Coupled Plasma Mass Spectroscopy Other

Herculaneum, Dunklin High School**AQS Site Number 29-099-0005**

1 Black Cat Dr., Herculaneum, MO, 63048

Latitude: 38.26703 **AQCR:** 070 Metropolitan St. Louis**Longitude:** -90.37875 **MSA:** 7040 St. Louis, MO-IL**Elevation (ft):** 445

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Lead (TSP) - LC FRM/FEM 14129 SLAMS 1 1/3 NBR COM 105 ug/m^3-LC 813 Inductively Coupled Plasma Mass Spectroscopy Source Oriented

Herculaneum, Mott Street**AQS Site Number 29-099-0027**

360 Short Street, Herculaneum, MO, 63048

Latitude: 38.263394 **AQCR:** 070 Metropolitan St. Louis**Longitude:** -90.379667 **MSA:** 7040 St. Louis, MO-IL**Elevation (ft):** 468

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
Lead (TSP) - LC FRM/FEM 14129	SLAMS	1	<input type="checkbox"/>	1/1	MID	COM	105	ug/m^3-LC	813	Inductively Coupled Plasma Mass Spectroscopy	Source Oriented & Highest Concentration	
Lead (TSP) - LC FRM/FEM 14129	SLAMS	2	<input type="checkbox"/>	1/2	MID	COM	105	ug/m^3-LC	813	Inductively Coupled Plasma Mass Spectroscopy	Quality Assurance (Collocation)	
Sulfur Dioxide	42401	SLAMS	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented & Highest Concentration
Sulfur Dioxide Max 5-min Avg	42406	SPM	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented & Highest Concentration
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	067	Instrumental: RM Young Model 05103	Other (5.5 meters)
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	067	Instrumental: RM Young Model 05103	Other (5.5 meters)

Herculaneum, Sherman

AQS Site Number **29-099-0013**

460 Sherman St., Herculaneum, MO, 63048

Latitude: 38.27176 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.37648 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 462

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Lead (TSP) - LC FRM/FEM 14129 SLAMS 1 1/3 NBR COM 105 ug/m³-LC 813 Inductively Coupled Plasma Mass Spectroscopy Source Oriented Spectroscopy

Hillcrest High School: PM10-FEM not submitting AOS dat AQS Site Number 29-077-0036

3319 N. Grant, Springfield, MO 65803

Latitude: 37.256069 **AQCR:** 139 SW Missouri

Longitude: -93.299692 **MSA:** 7920 Springfield, MO

Elevation (ft): 1321

Pollutant	AQS Monitor			AQS POC			AQS Keep			AQS Freq			AQS Scale			State-Obj			AQS Unit-Code		AQS Unit		AQS Method		AQS Method		AQS Monitor Objective	
	AQS Code	Monitor Type	POC	AQS	Keep	AQS	Freq	AQS	Scale	AQS	Obj	State-	Obj	AQS	Unit	AQS	Unit	AQS	Method	AQS	Unit	AQS	Method	AQS	Method	AQS	Monitor Objective	

Barometric Pressure 64101 SPM 1 1 N/A MET 059 mm (Hg) 014 Instrumental-Barometric Sensor Other

Indoor Temperature 62107 SPM 1 1 N/A MET 017 deg C 013 Electronic Averaging Other

Outdoor Temperature 62101 SPM 1 1 N/A MET 017 deg C 040 Electronic Averaging Other (4m Probe Height)

Ozone 44201 SLAMS 1 1 URB COM 007 ppm 047 Ultraviolet Photometric Population Exposure

Ozone 44201 SLAMS 2 1 URB COM 007 ppm 047 Ultraviolet Photometric -

PM10 - LC/FEM/NonFEM 85101 SPM 5 1 NBR COM 105 ug/m³-LC 790 FDMS-Gravimetric DF Population Exposure

PM10 - LC/FEM/NonFEM	85101	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	208	FMDS-Gravimetric	Population 1405- Exposure DF
PM10 - STP FRM/FEM	81102	SLAMS	3	<input type="checkbox"/>	1	NBR	COM	001	ug/m^3	079	R&P SA246B TEOM	Population Exposure
PM10 - STP FRM/FEM	81102	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	001	ug/m^3	208	FMDS-Gravimetric	Population 1405- Exposure DF
PM2.5 - LC FRM/FEM	88101	SLAMS	4	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	182	FMDS-Gravimetric	Population 1405- Exposure DF
PM2.5 Tot Atmospheric	88500	SPM	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric	Population 1405- Exposure DF
PM2.5 Volatile Channel	88503	SPM	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric	Population 1405- Exposure DF
PMCoarse - LC FRM/FEM	86101	SLAMS	8	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	207	FMDS-Gravimetric	Population 1405- Exposure DF
Relative Humidity	62201	SPM	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental-Computed (Indirect)	Other

Labadie, Northwest**AQS Site Number 29-183-9002**

Rt. 94, Augusta, MO 63332 near the intersection with Schluersburg Road

Latitude: 38.5818 **AQCR:** 070 Metropolitan St. Louis**Longitude:** -90.865528 **MSA:** 7040 St. Louis, MO-IL**Elevation (ft):** 550

Pollutant	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>		
	AQS Code	Monitor Type	POC	Keep	Freq	Scale	State- Obj	Unit- Code	Unit	Method Code	Method Code

Relative Humidity 62201 Industrial 1 1 N/A MET 019 %humidity 061 Met One 083D Other**Ladue****AQS Site Number 29-189-3001**

73 Hunter Ave., Ladue, MO 63124

Latitude: 38.65028 **AQCR:** 070 Metropolitan St. Louis**Longitude:** -90.35021 **MSA:** 7040 St. Louis, MO-IL**Elevation (ft):** 511

Pollutant	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>		
	AQS Code	Monitor Type	POC	Keep	Freq	Scale	State- Obj	Unit- Code	Unit	Method Code	Method Code

Barometric Pressure 64101 SPM 1 1 N/A MET 059 mm (Hg) 014 Instrumental-Barometric Sensor OtherIndoor Temperature 62107 SPM 1 1 N/A MET 017 deg C 013 Electronic Averaging OtherOutdoor Temperature 62101 SPM 1 1 N/A MET 017 deg C 040 Electronic Averaging Other (4m Probe Height)PM2.5 - LC FRM/FEM 88101 SLAMS 1 1 NBR COM 105 ug/m^3-LC 181 PM2.5 VS/CC FEM or Thermo Scientific 1405-F Population Exposure

PM2.5 - LC FRM/FEM	88101	SLAMS	2	<input type="checkbox"/>	1/6	NBR	COM	105	ug/m^3-LC	145	R&P 2025 Sequential w/VSCC	Quality Assurance (Collocation)
Relative Humidity	62201	SPM	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental-Computed (Indirect)	Other
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	067	Instrumental: RM Young Model 05103	Other (10m Tower)
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	067	Instrumental: RM Young Model 05103	Other (10m Tower)

Liberty: PM10-FEM not submitting AOS data

AQS Site Number **29-047-0005**

Highway 33 & County Home Rd., Liberty, MO 64068

Latitude: 39.30314 **AQCR:** 094 Metropolitan Kansas City

Longitude: -94.37678 **MSA:** 3760 Kansas City, MO-KS

Elevation (ft): 941

Pollutant	AQS Code	AQS Monitor Type	AQS			AQS			AQS			AQS Monitor Objective
			AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	Unit-Code	AQS Unit	Method Code	AQS Method	

Barometric Pressure	64101	SPM	1	<input type="checkbox"/>	1	N/A	MET	059	mm (Hg)	014	Instrumental-Barometric Sensor	Other
Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
Outdoor Temperature	62101	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (4m Probe Height)

Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	Population Exposure
Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	-
PM10 - LC/FEM/NonFEM	85101	SPM	5	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	790	FDMS-Gravimetric DF	Population 1405- Exposure
PM10 - LC/FEM/NonFEM	85101	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	208	FMDS-Gravimetric DF	Population 1405- Exposure
PM10 - STP FRM/FEM	81102	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	001	ug/m^3	208	FMDS-Gravimetric DF	Population 1405- Exposure
PM2.5 - LC FRM/FEM	88101	SLAMS	4	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	182	FMDS-Gravimetric DF	Population 1405- Exposure
PM2.5 Tot Atmospheric	88500	SPM	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric DF	Population 1405- Exposure
PM2.5 Volatile Channel	88503	SPM	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric DF	Population 1405- Exposure
PMCoarse - LC FRM/FEM	86101	SLAMS	8	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	207	FMDS-Gravimetric DF	Population 1405- Exposure
Relative Humidity	62201	SPM	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental-Computed (Indirect)	Other

Solar Radiation	63301	SPM	1	<input type="checkbox"/>	1	N/A	MET	079	W/m^2	011	Instrumental-Pyranometer	Other
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	067	Instrumental: RM Young Model 05103	Other (5.5 meters)
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	067	Instrumental: RM Young Model 05103	Other (5.5 meters)

Margaretta

AQS Site Number **29-510-0086**

4520 Margaretta, St. Louis, MO 63105

Latitude: 38.673172 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.239086 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 514

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
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Nitric Oxide	42601	SPM	1	<input type="checkbox"/>	1	NBR	COM	008	ppb	074	Chemiluminescence	Population Exposure
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Nitrogen Dioxide	42602	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	008	ppb	074	Chemiluminescence	Population Exposure
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Oxides of Nitrogen	42603	SPM	1	<input type="checkbox"/>	1	NBR	COM	008	ppb	074	Chemiluminescence	Population Exposure
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PM10 - STP FRM/FEM	81102	SLAMS	3	<input type="checkbox"/>	1	MID	COM	001	ug/m^3	079	R&P SA246B TEOM	Population Exposure
Sulfur Dioxide	42401	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	008	ppb	060	Pulsed Fluorescent	Population Exposure
Sulfur Dioxide Max 5-min Avg	42406	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	008	ppb	060	Pulsed Fluorescent	Population Exposure

Mark Twain State Park

AQS Site Number **29-137-0001**

20057 State Park Office Rd., Stoutsburg, MO 65283

Latitude: 39.47510 **AQCR:** 137 Northern Missouri

Longitude: -91.78899 **MSA:** 0000 Not in a MSA

Elevation (ft): 710

Pollutant	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>
	Code	Monitor	Type	POC	Keep	Freq	Scale	State-Obj	Unit-Code	Unit	Method	Code	Method

Indoor Temperature 62107 SPM 1 1 N/A MET 017 deg C 013 Electronic Averaging Other

Nitric Oxide 42601 SPM 1 1 REG COM 008 ppb 074 Chemiluminescence General/Background

Nitrogen Dioxide 42602 SPM 1 1 REG COM 008 ppb 074 Chemiluminescence General/Background

Oxides of Nitrogen 42603 SPM 1 1 REG COM 008 ppb 074 Chemiluminescence General/Background

Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	REG	COM	007	ppm	047	Ultraviolet Photometric	General/Background
Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	REG	COM	007	ppm	047	Ultraviolet Photometric	-
PM10 - STP FRM/FEM	81102	SPM	3	<input type="checkbox"/>	1	REG	SIP	001	ug/m^3	079	R&P SA246B TEOM	General/Background
Sulfur Dioxide	42401	SPM	1	<input type="checkbox"/>	1	REG	SIP	008	ppb	060	Pulsed Fluorescent	General/Background
Sulfur Dioxide Max 5-min Avg	42406	SPM	1	<input type="checkbox"/>	1	NBR	COM	008	ppb	060	Pulsed Fluorescent	General/Background
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	065	Instrumental: RM Young Model 05305	Other (10m Tower)
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	065	Instrumental: RM Young Model 05305	Other (10m Tower)

Maryland Heights

AQS Site Number **29-189-0014**

13044 Marine Ave., Maryland Heights, MO 63146

Latitude: 38.71085 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.47606 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 607

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	Population Exposure
Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	-

New Bloomfield

AQS Site Number **29-027-0002**

2625 Meadow Lake View, New Bloomfield, MO, 65063

Latitude: 38.70608 **AQCR:** 137 Northern Missouri

Longitude: -92.09308 **MSA:** 0000 Not in a MSA

Elevation (ft): 860

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	Max Ozone Concentration & Population Exposure
Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	-

Oates**AQS Site Number 29-179-0034**

13155 Highway KK, Boss, MO 65440

Latitude: 37.56485 **AQCR:** 138 SE Missouri**Longitude:** -91.11423 **MSA:** 0000 Not in a MSA**Elevation (ft):** 1134

Pollutant	<i>AQS</i> <i>Code</i>	<i>AQS</i> <i>Monitor</i> <i>Type</i>	<i>AQS</i> <i>POC</i>	<i>AQS</i> <i>Keep</i>	<i>AQS</i> <i>Freq</i>	<i>AQS</i> <i>Scale</i>	<i>AQS</i> <i>Obj</i>	<i>AQS</i> <i>Unit-</i> <i>Code</i>	<i>AQS</i> <i>Unit</i>	<i>AQS</i> <i>Method</i> <i>Code</i>	<i>AQS</i> <i>Method</i>	<i>AQS</i> <i>Monitor</i> <i>Objective</i>

Lead (TSP) - LC FRM/FEM 14129	SLAMS	1	<input type="checkbox"/>	1/6	NBR	COM	105	ug/m^3-LC	813	Inductively Coupled Plasma Mass Spectroscopy	Source Oriented
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Orchard Farm**AQS Site Number 29-183-1004**

2165 Highway V, St. Charles, MO 63301

Latitude: 38.8994 **AQCR:** 070 Metropolitan St. Louis**Longitude:** -90.44917 **MSA:** 7040 St. Louis, MO-IL**Elevation (ft):** 441

Pollutant	<i>AQS</i> <i>Code</i>	<i>AQS</i> <i>Monitor</i> <i>Type</i>	<i>AQS</i> <i>POC</i>	<i>AQS</i> <i>Keep</i>	<i>AQS</i> <i>Freq</i>	<i>AQS</i> <i>Scale</i>	<i>AQS</i> <i>Obj</i>	<i>AQS</i> <i>Unit-</i> <i>Code</i>	<i>AQS</i> <i>Unit</i>	<i>AQS</i> <i>Method</i> <i>Code</i>	<i>AQS</i> <i>Method</i>	<i>AQS</i> <i>Monitor</i> <i>Objective</i>

Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
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Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	URB	COM	007	ppm	047	Ultraviolet Photometric	Extreme Downwind
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Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	URB	COM	007	ppm	047	Ultraviolet Photometric	-
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18701 Old Highway 66, Pacific, MO 63039

Latitude: 38.49011 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.70509 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 524

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging		Other
Outdoor Temperature	62101	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging		Other
Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric		Population Exposure
Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric		-
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	067	Instrumental: RM Young Model 05103	Other (5.5 meters)	
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	067	Instrumental: RM Young Model 05103	Other (5.5 meters)	

*Pevely (Proposed for discontinuation)*AQS Site Number **29-099-0009**

500 Dow Industrial Dr., Pevely, MO 63070

Latitude: 38.2861 **AQCR:** 070 Metropolitan St. Louis**Longitude:** -90.38094 **MSA:** 7040 St. Louis, MO-IL**Elevation (ft):** 409

Pollutant	AQS Code	AQS Monitor Type	AQS	AQS	AQS	AQS	AQS	AQS	AQS	AQS
			POC	Keep	Freq	Scale	Obj	Unit- Code	Unit	Method Code

Lead (TSP) - LC FRM/FEM 14129	SLAMS	1	<input type="checkbox"/>	1/6	NBR	COM	105	ug/m^3-LC	813	Inductively Coupled Plasma Mass Spectroscopy	Source Oriented
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Richards Gebaur-South: PM10-FEM not submitting AOS data AQS Site Number **29-037-0003**

1802 E. 203rd Street, Belton, MO, 64012

Latitude: 38.75961 **AQCR:** 094 Metropolitan Kansas City**Longitude:** -94.57983 **MSA:** 3760 Kansas City, MO-KS**Elevation (ft):** 1082

Pollutant	AQS Code	AQS Monitor Type	AQS	AQS	AQS	AQS	AQS	AQS	AQS	AQS
			POC	Keep	Freq	Scale	Obj	Unit- Code	Unit	Method Code

Barometric Pressure	64101	SPM	1	<input type="checkbox"/>	1	N/A	MET	059	mm (Hg)	014	Instrumental- Barometric Sensor	Other
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Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
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Outdoor Temperature	62101	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (4m Probe Height)
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Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	Population Exposure
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Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	-
PM10 - LC/FEM/NonFEM	85101	SPM	5	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	790	FDMS-Gravimetric 1405- DF	Population Exposure
PM10 - LC/FEM/NonFEM	85101	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	208	FMDS-Gravimetric 1405- DF	Population Exposure
PM10 - STP FRM/FEM	81102	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	001	ug/m^3	208	FMDS-Gravimetric 1405- DF	Population Exposure
PM2.5 - LC FRM/FEM	88101	SLAMS	4	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	182	FMDS-Gravimetric 1405- DF	Population Exposure
PM2.5 Tot Atmospheric	88500	SPM	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric 1405- DF	Population Exposure
PM2.5 Volatile Channel	88503	SPM	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric 1405- DF	Population Exposure
PMCoarse - LC FRM/FEM	86101	SLAMS	8	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	207	FMDS-Gravimetric 1405- DF	Population Exposure
Relative Humidity	62201	SPM	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental-Computed (Indirect)	Other

Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	065	Instrumental: RM Young Model 05305	Other (10m Tower)
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Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	065	Instrumental: RM Young Model 05305	Other (10m Tower)
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Rider Trail, I-70

AQS Site Number **29-189-0016**

13080 Hollenberg Drive, Bridgeton, MO 63044

Latitude: 38.75264 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.44884 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 515

Pollutant	AQS Code	AQS			AQS Scale	State- Obj	AQS Unit- Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
		AQS Monitor Type	POC	Keep							

Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
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Nitric Oxide	42601	SPM	1	<input type="checkbox"/>	1	MIC	COM	008	ppb	074	Chemiluminescen ce	Source Oriented
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Nitrogen Dioxide	42602	SLAMS	1	<input type="checkbox"/>	1	MIC	COM	008	ppb	074	Chemiluminescen ce	Source Oriented
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Outdoor Temperature	62101	SPM	2	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (10m Probe Height)
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Outdoor Temperature	62101	SPM	3	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (2m Probe Height)
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Outdoor Temperature Diff	62106	SPM	1	<input type="checkbox"/>	1	N/A	MET	116	Temp Diff deg C	041	Instrumental: Elect or Mach Avg Lev 2-Lev1	Other (10m - 2m Probe Height)
Oxides of Nitrogen	42603	SPM	1	<input type="checkbox"/>	1	MIC	COM	008	ppb	074	Chemiluminescen ce	Source Oriented
Precipitation	65102	SPM	1	<input type="checkbox"/>	1	N/A	MET	021	inches	014	Heated Tipping Bucket	Other
Relative Humidity	62201	SPM	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental- Computed (Indirect)	Other
Solar Radiation	63301	SPM	1	<input type="checkbox"/>	1	N/A	MET	079	W/m^2	011	Instrumental- Pyranometer	Other
Sulfur Dioxide	42401	SPM	1	<input checked="" type="checkbox"/>	1	MID	SPP	008	ppb	060	Pulsed Fluorescent	Population Exposure
Sulfur Dioxide Max 5-min Avg	42406	SPM	1	<input checked="" type="checkbox"/>	1	MID	SPP	008	ppb	060	Pulsed Fluorescent	Population Exposure
WD - Sigma Theta (Horizontal)	61106	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	020	Arithmetic Standard Deviation	Other (10m Tower)
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	065	Instrumental: RM Young Model 05305	Other (10m Tower)

Wind Speed - Resultant 61103 SPM 1 1 N/A MET 012 mph 065 Instrumental: RM Young Model 05305 Other (10m Tower)

Rocky Creek

AQS Site Number **29-047-0006**

13131 Highway 169, Kansas City, MO 64165

Latitude: 39.33188 **AQCR:** 094 Metropolitan Kansas City

Longitude: -94.58069 **MSA:** 3760 Kansas City, MO-KS

Elevation (ft): 990

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature 62107 SPM 1 1 N/A MET 017 deg C 013 Electronic Averaging Other

Ozone 44201 SLAMS 1 1 NBR COM 007 ppm 047 Ultraviolet Photometric Population Exposure

Ozone 44201 SLAMS 2 1 NBR COM 007 ppm 047 Ultraviolet Photometric -

Savannah

AQS Site Number **29-003-0001**

11796 Highway 71, Savannah, MO 64485

Latitude: 39.9544 **AQCR:** 137 Northern Missouri

Longitude: -94.849 **MSA:** 7000 St. Joseph, MO

Elevation (ft): 1120

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature 62107 SPM 1 1 N/A MET 017 deg C 013 Electronic Averaging Other

Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	Population Exposure
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Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	-
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South Broadway: PM10-FEM not submitting AOS data AQS Site Number **29-510-0007**

8227 South Broadway, St. Louis, MO 63111

Latitude: 38.5425 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.263611 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 452

Pollutant	AQS Monitor		AQS POC		AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method-Code	AQS Method	AQS Monitor Objective
	AQS Code	Monitor Type											

Barometric Pressure	64101	SLAMS	1	<input type="checkbox"/>	1	N/A	MET	059	mm (Hg)	014	Instrumental-Barometric Sensor	Other
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Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
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Outdoor Temperature	62101	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (4m Probe Height)
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PM10 - LC/FEM/NonFEM	85101	SPM	5	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	790	FDMS-Gravimetric	Population 1405- Exposure DF
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PM10 - LC/FEM/NonFEM	85101	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	208	FMDS-Gravimetric	Population 1405- Exposure DF
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PM10 - STP FRM/FEM	81102	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	001	ug/m^3	208	FMDS-Gravimetric	Population DF
PM2.5 - LC FRM/FEM	88101	SLAMS	4	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	182	FMDS-Gravimetric	Population DF
PM2.5 Tot Atmospheric	88500	SPM	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric	Population DF
PM2.5 Volatile Channel	88503	SPM	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric	Population DF
PMCoarse - LC FRM/FEM	86101	SLAMS	8	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	207	FMDS-Gravimetric	Population DF
Relative Humidity	62201	SPM	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental-Computed (Indirect)	Other

St. Joe State Park

AQS Site Number **29-187-0007**

2800 Pimville Rd., Park Hills, MO 63601

Latitude: 37.81413 **AQCR:** 138 SE Missouri

Longitude: -90.50738 **MSA:** 0000 Not in a MSA

Pollutant	AQS Code	AQS Monitor			AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method	AQS Code	AQS Method	AQS Monitor Objective
		Type	POC	Keep											

Lead (TSP) - LC FRM/FEM 14129	SPM	1	<input type="checkbox"/>	1/6	NBR	COM	105	ug/m^3-LC	813	Inductively Coupled Plasma Mass Spectroscopy	Source Oriented
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St. Joseph Pump Station: PM10-FEM not submitting AOS data AQS Site Number **29-021-0005**

S. Highway 759, St. Joseph, MO 64501

Latitude: 39.741667 **AQCR:** 094 Metropolitan Kansas City

Longitude: -94.858333 **MSA:** 7000 St. Joseph, MO

Elevation (ft): 845

Pollutant	AQS Code	AQS Monitor Type	AQS	AQS	AQS	AQS	AQS	AQS	AQS	AQS	
			POC	Keep	Freq	Scale	Obj	Unit- Code	Unit	Method Code	Method
Barometric Pressure	64101	SPM	1	<input type="checkbox"/>	1	N/A	MET	059	mm (Hg)	014	Instrumental-Barometric Sensor
Barometric Pressure	64101	SPM	2	<input type="checkbox"/>	1	N/A	MET	059	mm (Hg)	014	Instrumental-Barometric Sensor
Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging
Outdoor Temperature	62101	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging
Outdoor Temperature	62101	SPM	2	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging
PM10 - LC/FEM/NonFEM	85101	SPM	5	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	790	FDMS-Gravimetric DF 1405- Exposure
PM10 - LC/FEM/NonFEM	85101	SPM	6	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	790	FDMS-Gravimetric DF 1405- Quality Assurance (Collocation)

PM10 - LC/FEM/NonFEM	85101	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	208	FMDS-Gravimetric DF	Population 1405- Exposure
PM10 - LC/FEM/NonFEM	85101	SLAMS	9	<input checked="" type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	208	FMDS-Gravimetric DF	Quality Assurance (Collocation)
PM10 - STP FRM/FEM	81102	SLAMS	3	<input type="checkbox"/>	1	NBR	COM	001	ug/m^3	079	R&P SA246B TEOM	Population Exposure
PM10 - STP FRM/FEM	81102	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	001	ug/m^3	208	FMDS-Gravimetric DF	Population 1405- Exposure
PM10 - STP FRM/FEM	81102	SLAMS	9	<input checked="" type="checkbox"/>	1	NBR	COM	001	ug/m^3	208	FMDS-Gravimetric DF	Quality Assurance (Collocation)
PM2.5 - LC FRM/FEM	88101	SLAMS	4	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	182	FMDS-Gravimetric DF	Population 1405- Exposure
PM2.5 - LC FRM/FEM	88101	SLAMS	5	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	182	FMDS-Gravimetric DF	Quality Assurance (Collocation)
PM2.5 Tot Atmospheric	88500	SPM	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FMDS-Gravimetric DF	Population 1405- Exposure
PM2.5 Tot Atmospheric	88500	SPM	2	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FMDS-Gravimetric DF	Quality Assurance (Collocation)
PM2.5 Volatile Channel	88503	SPM	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FMDS-Gravimetric DF	Population 1405- Exposure

PM2.5 Volatile Channel	88503	SPM	2	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric DF	1405- Assurance (Collocation)	Quality
PMCoarse - LC FRM/FEM	86101	SLAMS	8	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	207	FMDS-Gravimetric DF	1405- Population Exposure	Exposure
PMCoarse - LC FRM/FEM	86101	SLAMS	9	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	207	FMDS-Gravimetric DF	1405- Assurance (Collocation)	Quality
Relative Humidity	62201	SPM	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental-Computed (Indirect)		Other
Relative Humidity	62201	SPM	2	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental-Computed (Indirect)		Other
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	067	Instrumental: RM Young Model 05103	RM Other (5.5 meters)	Other (5.5 meters)
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	067	Instrumental: RM Young Model 05103	RM Other (5.5 meters)	Other (5.5 meters)

Trimble

AQS Site Number **29-049-0001**

7536 SW. O Highway, Trimble, MO 64492

Latitude: 39.53063 **AQCR:** 137 Northern Missouri

Longitude: -94.55594 **MSA:** 3760 Kansas City, MO-KS

Elevation (ft): 1033

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	Max Ozone Concentration
Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	NBR	COM	007	ppm	047	Ultraviolet Photometric	-

Troost: PM10-FEM not submitting AOS data

AQS Site Number **29-095-0034**

724 Troost (Rear), Kansas City, MO 64106

Latitude: 39.10465 **AQCR:** 094 Metropolitan Kansas City

Longitude: -94.57055 **MSA:** 3760 Kansas City, MO-KS

Elevation (ft): 941

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	AQS Obj	State-Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Barometric Pressure	64101	SPM	1	<input type="checkbox"/>	1	N/A	MET	059	mm (Hg)	014	Instrumental-Barometric Sensor	Other
Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
Nitric Oxide	42601	SPM	1	<input type="checkbox"/>	1	URB	COM	008	ppb	074	Chemiluminescence	Population Exposure
Nitrogen Dioxide	42602	SLAMS	1	<input type="checkbox"/>	1	URB	COM	008	ppb	074	Chemiluminescence	Population Exposure

Outdoor Temperature	62101	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other (4m Probe Height)
Oxides of Nitrogen	42603	SPM	1	<input type="checkbox"/>	1	URB	COM	008	ppb	074	Chemiluminescence	Population Exposure
PM10 - LC/FEM/NonFEM	85101	SPM	5	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	790	FDMS-Gravimetric DF	Population 1405- Exposure
PM10 - LC/FEM/NonFEM	85101	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	208	FMDS-Gravimetric DF	Population 1405- Exposure
PM10 - STP FRM/FEM	81102	SLAMS	3	<input type="checkbox"/>	1	NBR	COM	001	ug/m^3	079	R&P SA246B TEOM	Population Exposure
PM10 - STP FRM/FEM	81102	SLAMS	8	<input checked="" type="checkbox"/>	1	NBR	COM	001	ug/m^3	208	FMDS-Gravimetric DF	Population 1405- Exposure
PM2.5 - LC FRM/FEM	88101	SLAMS	4	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	182	FMDS-Gravimetric DF	Population 1405- Exposure
PM2.5 Tot Atmospheric	88500	SPM	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric DF	Population 1405- Exposure
PM2.5 Volatile Channel	88503	SPM	1	<input type="checkbox"/>	1	NBR	AQI	105	ug/m^3-LC	790	FDMS-Gravimetric DF	Population 1405- Exposure
PMCoarse - LC FRM/FEM	86101	SLAMS	8	<input type="checkbox"/>	1	NBR	COM	105	ug/m^3-LC	207	FMDS-Gravimetric DF	Population 1405- Exposure

Relative Humidity	62201	SPM	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental-Computed (Indirect)	Other
Sulfur Dioxide	42401	SLAMS	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented
Sulfur Dioxide Max 5-min Avg	42406	SLAMS	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented

Ursuline North

AQS Site Number **29-099-0025**

210 Glennon Heights Rd., Crystal City, MO 63019

Latitude: 38.243 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.37372 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 578

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State- Obj	AQS Unit- Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective

Lead (TSP) - LC FRM/FEM	14129	SLAMS	1	<input type="checkbox"/>	1/6	NBR	COM	105	ug/m^3-LC	813	Inductively Coupled Plasma Mass Spectroscopy	Source Oriented & Upwind Background
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Watkins Mill State Park

AQS Site Number **29-047-0003**

Watkins Mill Road, Lawson, MO 64062

Latitude: 39.407419 **AQCR:** 094 Metropolitan Kansas City

Longitude: -94.265142 **MSA:** 3760 Kansas City, MO-KS

Elevation (ft): 1009

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State- Obj	AQS Unit- Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective

Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
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Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	URB	COM	007	ppm	047	Ultraviolet Photometric	Extreme Downwind
Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	URB	COM	007	ppm	047	Ultraviolet Photometric	-

West Alton

AQS Site Number **29-183-1002**

General Elecric Store, Highway 94, West Alton, MO 63386

Latitude: 38.8725 **AQCR:** 070 Metropolitan St. Louis

Longitude: -90.226389 **MSA:** 7040 St. Louis, MO-IL

Elevation (ft): 425

Pollutant	AQS Code	AQS Monitor Type	AQS POC	AQS Keep	AQS Freq	AQS Scale	State-Obj	AQS Unit-Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
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Indoor Temperature	62107	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	013	Electronic Averaging	Other
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Outdoor Temperature	62101	SPM	1	<input type="checkbox"/>	1	N/A	MET	017	deg C	040	Electronic Averaging	Other
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Ozone	44201	SLAMS	1	<input type="checkbox"/>	1	URB	COM	007	ppm	047	Ultraviolet Photometric	Max Ozone Concentration & Population Exposure
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Ozone	44201	SLAMS	2	<input type="checkbox"/>	1	URB	COM	007	ppm	047	Ultraviolet Photometric	-
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Relative Humidity	62201	SPM	1	<input type="checkbox"/>	1	N/A	MET	019	%humidity	020	Instrumental-Computed (Indirect)	Other
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Solar Radiation	63301	SPM	1	<input type="checkbox"/>	1	N/A	MET	079	W/m^2	011	Instrumental-Pyranometer	Other
Wind Direction - Resultant	61104	SPM	1	<input type="checkbox"/>	1	N/A	MET	014	deg	067	Instrumental: RM Young Model 05103	Other (10m Tower)
Wind Speed - Resultant	61103	SPM	1	<input type="checkbox"/>	1	N/A	MET	012	mph	067	Instrumental: RM Young Model 05103	Other (10m Tower)

Magnitude 7 Metals (PQAO - 2368)

Magnitude 7 Metals, Site # 1 AECI Water Tower Location **AQS Site Number 29-143-9001**

391 St Jude Industrial Park, New Madrid, MO 63869

Latitude: 36.51364 **AQCR:** 138 SE Missouri

Longitude: -89.56093 **MSA:** 0000 Not in a MSA

Elevation (ft): 297

Pollutant	AQS Code	AQS Monitor Type	AQS			AQS Scale	State- Obj	AQS Unit- Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
			AQS POC	Keep	AQS Freq							

Sulfur Dioxide	42401	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented
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Sulfur Dioxide Max 5-min Avg	42406	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented
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Magnitude 7 Metals, Site # 2 East Graveyard

AQS Site Number 29-143-9002

391 St Jude Industrial Park, New Madrid, MO 63869

Latitude: 36.50838 **AQCR:** 138 SE Missouri

Longitude: -89.56074 **MSA:** 0000 Not in a MSA

Elevation (ft): 296

Pollutant	AQS Code	AQS Monitor Type	AQS			AQS Scale	State- Obj	AQS Unit- Code	AQS Unit	AQS Method Code	AQS Method	AQS Monitor Objective
			AQS POC	Keep	AQS Freq							

Sulfur Dioxide	42401	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented
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Sulfur Dioxide Max 5-min Avg	42406	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented
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*Magnitude 7 Metals, Site # 3 West Entrance**AQS Site Number 29-143-9003*

391 St Jude Industrial Park, New Madrid, MO 63869

Latitude: 36.50899 *AQCR:* 138 SE Missouri*Longitude:* -89.57099 *MSA:* 0000 Not in a MSA*Elevation (ft):* 298

<i>Pollutant</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>	<i>AQS</i>					
	<i>Code</i>	<i>Monitor</i>	<i>Type</i>	<i>POC</i>	<i>Keep</i>	<i>Freq</i>	<i>Scale</i>	<i>Obj</i>	<i>Unit-Code</i>	<i>Unit</i>	<i>Method</i>	<i>Code</i>	<i>Method</i>	<i>Monitor</i>

Sulfur Dioxide	42401	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented
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Sulfur Dioxide Max 5-min Avg	42406	Industrial	1	<input type="checkbox"/>	1	MID	COM	008	ppb	060	Pulsed Fluorescent	Source Oriented
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**APPENDIX 2: COMMENTS ON PROPOSED 2017 MONITORING NETWORK PLAN,
RESPONSES TO COMMENTS, AND CORRECTIONS**

This proposed Monitoring Network Plan was posted on the internet for public comment on June 1, 2017. No comments were received through July 3, 2017. Therefore, no response to comments is needed.

Two corrections to the proposed plan are included in this final plan, both in Section 1:

- The discussion of the NorthStar Battery facility was updated to refer to the most recent revised permit for the facility and the lead emission limit in that permit.
- The date for proposed discontinuation of the Pevely lead monitoring site was corrected to the end of calendar year 2017.